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Vol. LIX, No. 10 NEW YORK, OCTOBER, 1931 Twenty-Five Cents a Copy Two Dollars a Year

Prevention and Treatment of the Deformities in Anterior Poliomyelitis

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ANTERIOR poliomyelitis is rarely diagnosed in the acute febrile stage. The diagnosis is usually made after the paralysis appears. In order fully to comprehend the clinical picture of anterior poliomyelitis, it is necessary to reflect upon the fact that the disease is an acute general systemic infection. This circumstance likewise is vitally important to the success of serum therapy, for, unless the diagnosis is made before paralysis appears, it is probably useless to use serum.

Given a patient taken sick with fever, a gastro-intestinal disturbance usually lasting one day and then clearing up, with no recurrence of symptoms for three or four days, when fever, gastro-intestinal symptoms and frequently headache, irritability, drowsiness and rigidity of the spine occurs, one should be very suspicious of the presence of anterior poliomyelitis and a spinal tap should be done. Should the fluid be under increased pressure, not quite clear, presenting a ground glass appearance, showing microscopically an increase in cells, usually between fifty and two hundred and fifty, but occasionally as high as seven to eight hundred, largely polynuclear early, and later lymphocytes, with an increase in globulin, the diagnosis of anterior poliomyelitis should be made and serum given.

Twenty cc. of convalescent serum should be given intraspinally, after withdrawal of an equal or somewhat greater amount of fluid, and then fifty cc. intravenously or intramuscularly. The following day twenty cc. should again be given intraspinally. It may be of advantage to give the patient a large dose of magnesium sulphate by mouth a short time before the initial intraspinal dose of serum. This procedure has the double advantage of withdrawing fluid from the spinal space and of influencing favorably the constipation which is almost universally present at this stage of the disease.

In addition to the serum therapy the treatment consists of rest, freedom from excitement and activity, and recumbency for a period of days or weeks. All cases should be kept quiet until the tenderness and fever have disappeared.

In a few hours or a few days after the onset of the disease, in cases in which serum has not been given, paralysis appears. This paralysis is usually of the flaccid type, reflexes are lost and the reaction of degeneration soon appears. At the onset, the paralysis is usually much more severe than the one that persists. One or more limbs may be affected. The lower extremities are far more often paralyzed than the upper.

The affected parts are tender to the touch and motion. This tenderness may persist for several weeks, during which time it is best to leave the patient alone except for the prevention of the contractures.

Deformities are not always caused by a permanent paralysis, but may be caused by the force of gravity, by the unopposed action of the active muscles and by functional use. In a large number of cases, one or more of the dosi-flexors of the foot may be weakened or paralyzed and the foot drops under the influence of gravity; if this attitude is permitted to persist, the muscles on the posterior aspect of the limb accommodate themselves to it and become shortened. Hence to prevent this deformity the foot should be maintained at a right angle to the leg during this painful stage. A very good and simple method is to have the soles of the feet rest against the foot of the bed. Other means which have proven of value are the application of a light Volkman's splint, or a posterior moulded plaster of Paris bandage. By these means, splints, braces and plaster of Paris bandages, the deformities at the knee and at the hip can be prevented. This treatment will allow the patients to recover a considerable degree of muscle power which would otherwise be lost entirely or regained much later by operative procedures. Massage, passive movements and electricity should not be used during this tender stage. Frequent change of position is desirable so as to prevent pressure sores. Keeping the patients out of doors is very beneficial.

After the tenderness has disappeared, active treatment should be begun—the sooner the better. The resistance of the patient should be built up with general tonics, fresh air and good food. Massage, electricity and muscle training should be given until the period of spontaneous repair has passed. This period is an indefinite one, and by most authorities is said to be between one and two and a half years after the onset.

The massage should be given daily for fifteen minute periods. It may be given either with an electric vibrator or manually, preferably the latter. The mothers should be taught how to massage the affected parts at home, so that no time is lost. The benefits derived from massage are: (1) the improvement of the local and general circulation. (2) The prevention of muscular deterioration.

In regard to the electrical treatment, there is a disagreement as to the benefits derived therefrom. In our experience we have found this treatment very helpful. Diathermy is valuable as is also static current. These currents improve the life of the muscles and nerves, without overstimulation. Should overstimulation occur, much serious damage can be done. Hence it is best to give these treatments for short periods of time, about five to ten minute séances three times a week, alternating them with massage. Where static or diathermy cannot be had, the galvanic can be used. The faradic current is useless and can only do harm by overstimulating the muscles and nerves. Hydrotherapy is of some benefit, as it increases the circulation and stimulates the growth of the limb. The affected part should be immersed in water 95 to 100 degrees F. every night for fifteen to twenty minute periods.

Muscle training is most useful. It is based on the fact that all the motor centers in the cord have not been destroyed, unless the destruction in the cord has been a very extensive one. Hence new connections and new paths for sending a motor impulse from the brain to the muscles are produced. Passive movement is the first one done. It should be done slowly and to the fullest range of motion possible, pausing at each extreme and returning the part to the normal position when the motion is finished. The same movement is then performed against slight resistance offered by the patient, the resistance being gradually increased. The patient then performs the movement himself while the physician guides it along the proper plane. The guidance is gradually diminished and as the patient becomes more proficient the guidance is removed entirely. Finally the movement is performed against the resistance of the physician, the resistance being varied according to the degree of paralysis present. In addition to the muscle training, a good means at our disposal is to get the patient on his feet as soon as possible after the painful stage and in that way have him use his muscles by his own efforts, to walk and balance. The sitting posture is most adaptable for training the muscles of the spine and trunk.

If there is fixed deformity, by which is meant if the functions of a joint are limited and there is restriction of its arc, this deformity must be overcome before any treatment can be satisfactory. The deformities usually met with are footdrop or pes equinus, flexion deformity at the knee, and flexion and abduction deformity at the hip. In the spine the most troublesome deformity is lateral curvature. At times, if the paralysis of the posterior group of muscles is extreme, kyphosis may be induced. In the shoulder the deformities are usually slight, because the part is not subjected to the strain of weight bearing and because the force of gravity is opposed to muscular contraction. The best way to overcome these contractures or fixed deformities is by gradual forcible stretching and the subsequent application of plaster of Paris bandages, splints or braces. One must always bear in mind the possibility of injuring nerves and blood vessels when stretching a limb. If the contracture deformity is too powerful to be controlled by these means, tendon lengthening by either the open or subcutaneous method and myotomy with the subsequent application of plaster of Paris bandages should be resorted to. These preliminary steps should subsequently be followed by mechanical or operative measures. A few words about lateral curvature of the spine. This deformity should be looked for in every case and where present, especially low down in the spine, forcible correction, and retention by a plaster jacket, should be done. The jacket should be applied early and worn persistently because the cause of the deformity, which is the unilateral paralysis, is always present to aggravate the condition. If after about one to two and a half years of conservative treatment cases do not respond satisfactorily they are then ready for radical operation.

Operations are undertaken (1) to correct the fixed deformity when present, (2) to improve the muscle function and (3) to secure stability of useless joints.

1. The correction of fixed deformities has already been discussed.

2. The improvement of muscle function is usually accomplished by transplanting the tendon of a sound muscle for that of a paralyzed one. It is best to defer this operative procedure for a period of at least one to two and a half years after the onset of the paralysis as within that time all spontaneous recovery of function should have taken place. Good function in the limb operated upon can be expected

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Common Neurologic Problems Encountered in General Practice*

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NEUROLOGIC diagnosis is a three-fold process consisting of: 1. The determination of disturbances of function. 2. The translation of such disturbances in terms of localization of the structural changes in the tissues subserving such function. 3. The determination of the nature of the pathologic process.

Early neurologic symptoms are often unobtrusive and transitory; they may impress themselves so little on the mind of the patient that they are recalled only when a precise and detailed account of the mode of onset and progress of the illness is insisted upon. A knowledge of the chronologic order of the appearance of every symptom is in most cases of nervous disease absolutely essential for a correct diagnosis.

Many of the early evidences of nervous disease manifest themselves only in the mental sphere. Changes in personality and conduct and memory defects may be the first symptoms of cerebral arteriosclerosis, general paralysis of the insane, brain tumor, polyneuritis, and of the nervous complications of pernicious anemia.

HEADACHE is a most common complaint heard in a physician's consultation room. Although it is true that every headache is not due to a tumor or abscess of the brain, it is amazing to hear in how many cases of brain tumor the early headache has been incorrectly attributed to a "bad stomach", cerebral anemia, refractive error, focal infection from diseased teeth, tonsils and sinuses, arterial hypertension, psychoneurosis and what not.

The persistence of headache after the exclusion and eradication of the more common extracranial causes of headache makes it imperative that the physician focus his attention to the possibility of an intracranial expanding lesion such as tumor, abscess or aneurysm as the cause of the headache.

Headache due to brain tumor is nearly always paroxysmal, or, if continuous, it has paroxysmal exacerbations. It is frequently associated with evidences of increased intracranial pressure such as nausea, vomiting, dizziness and papilledema. Large brain tumors, however, may run their course to a fatal termination without ever giving rise to headache. This is especially the case in deeply situated tumors that do not impinge on the meninges or on the cranial bones. The location of the headache does not always correspond to the site of the tumor or abscess. Posterior fossa tumors produce most intense headaches which are usually associated very early with papilledema, vertigo, vomiting and rigidity of the neck. Frontal lobe tumors may give rise to occipital headaches and posterior fossa tumors to frontal headaches. Pituitary tumors give rise to headaches which the patients localize in both temples.

Repeated ophthalmoscopic and perimetric visual field examinations are indicated in every case of obscure headache. Vertigo, with or without headache, must never be attributed finally to local labyrinthine disease, cerebral anemia or hyperemia, or to gastrointestinal disturbances until a careful neuro-otologic examination with the usual turning and pass-pointing tests has excluded the presence of a growth in the posterior cranial fossa.

THE ideal time to diagnose brain tumors is before the appearance of symptoms and signs of increased intracranial pressure with secondary internal hydrocephalus. The localization and extirpation of removable extracranial growths is greatly facilitated when their presence can be recognized by the direct symptoms which they produce.

In the diagnosis of brain abscess it is to be remembered that intracranial collections of pus are nearly always secondary to a pus focus elsewhere in the body. The most common cause is chronic otitis, but it may be a fulminating acute otitis complicated by mastoiditis and labyrinthitis, although in these conditions, meningitis is the more usual complication. Brain abscess may be secondary to purulent disease of the frontal, ethmoidal or sphenoidal sinuses. The abscess in these cases is usually located in a part of the brain adjacent to the source of infection. Trauma to the skull and its coverings, especially with injury to the dura, is a frequent cause of brain abscess which may appear immediately after the receipt of the injury or after a long latent period has elapsed. Metastatic brain abscesses are usually multiple and are secondary to purulent processes anywhere in the body, especially in the lungs, pleurae and bronchi. The diagnosis of a brain abscess, then, is based on the history and evidence of the trauma or infection and the symptoms and signs of an expanding intracranial lesion. Choked disk and the other evidences of increased intracranial pressure are more common in tumor than in abscess. Brain abscess may run an afebrile course until the abscess breaks into the ventricles or meninges. This is important to remember because in sinus thrombosis, in contrast to brain abscess, fever of an intermittent type is always present.

THE most common forms of so-called "reflex headaches" are the orbital headaches due to ocular disease such as glaucoma, iritis, refractive errors and prolonged eye strain. Reflex headaches may also be due to sinus and ear disease.

Neurasthenia and psychasthenia from physical or mental over-work are often associated with headaches which the patients describe as a feeling of a "tight elastic band around the head", or as a feeling "as if a nail were pressing into the top of the brain."

The headaches encountered in the post-traumatic neuroses following injury to the head, with or without loss of consciousness, are obstinate and recurring; they are usually associated with a dizziness, noises in the head, insomnia or hypersomnia, emotional disturbances and loss of initiative with memory disturbances. Post-encephalitic headaches are generalized, dull in character and worse as the day progresses. Both of these varieties

* Read before Queens County Medical Society (Graduate Education), February 20, 1931.

of headache occur on slight mental or physical exertion and in the traumatic cases when the patient is allowed to return to work too soon. The importance of complete physical and mental rest after head injuries, even in the absence of signs of organic nervous disease, is self-evident.

Some headaches are associated with great pallor of the face and are apparently due to spasm of the cerebral vessels, others are associated with arterial hypertension, throbbing of the arteries and flushed face. The former are relieved by the inhalation of amyl nitrite, the latter by the administration of bromides and the employment of measures for the relief of vascular congestion.

MIGRAINE, or "sick headache," or so-called "bilious headache" is characterized by paroxysmal attacks of hemicrania recurring at intervals of days, weeks or months with complete freedom from symptoms during the intervals. The duration of the paroxysms varies from a few hours to a day or two. Most cases begin in the morning and last till the same evening. Migraine is a familial disease. It appears in childhood, recurs throughout the active period of life and tends to disappear in old age. It is often preceded by a visual aura in the form of a scintillating blind area (scotoma) which is bounded at its periphery by a luminous zigzag colored spectrum. These scotomas may occasionally assume the form of a complete though temporary hemianopsia. Less commonly a migrainous attack may be preceded by a sensation of numbness or tingling in one hand extending slowly up the arm, to the face and tongue, to be followed by pain on the opposite side of the head. If such an aura involves the right side of the body it may be associated with a slight transitory aphasia. This form of migraine is distinguished from a minor epileptiform attack by the greater intensity and unilateral limitation of the headache, by the more or less deliberate progression of the aura, by the absence of disturbances in consciousness, by the absence of colonic movements and by the fact that the premonitory numbness or tingling of migraine may spread bilaterally to the tongue and lips, whereas in an epileptiform attack, if the aura extends to the tongue or face, it always remains unilateral. This differentiation, however, may become much more difficult when, as is not infrequently the case, migraine and epilepsy alternate in the same patient. During an attack of migraine there may appear in addition to the hemicrania various vasomotor and other sympathetic nervous system phenomena such as flushing of the face and ears and a dilated pupil on the involved side. An attack of migraine usually terminates in vomiting which relieves the headache.

A less frequent form of migraine is the so-called "migraine ophthalmoplegique," in which in addition to the hemicrania there occurs a transient paresis or paralysis of the third nerve (ptosis, external strabismus, mydriasis, etc.) on the same side as the headache.

MANY remedies have been and still are extensively employed in the treatment of migraine. This is undoubtedly due to our ignorance of the cause of the condition. At the beginning of an attack nitroglycerin 1/100 with erythrol tetranitrate 1 grain may abort an attack. When the headache is well established 2½ grains each of pyramidon and phenacetin, with ½ grain of codeine, may be used every half hour for three doses. Morphine should be used only as a last resort. The treatment of the interval between attacks is of even greater importance. Out of door life, healthy exercise with effective elimination and a well regulated diet will restore a defective and incapacitating metabolism and possibly minimize the frequency of occurence of the attacks themselves.

Lower half headache of Sluder is characterized by pain about the eye, upper jaw and teeth, extending into the temple, with earache and pain in the mastoid region. It often extends into the back of the head, neck, shoulder, forearm, hand and fingers. It is sometimes accompanied by sneezing and photophobia. This form of headache is relieved by the direct application of cocaine to the spheno-palatine (Meckel's) ganglion.

Toxic headache, due to alcohol, lead, ether, carbon monoxide, etc., is recognized by the history of the case and the detection of the toxic agent in one or more of the body fluids. The successful treatment of this form of headache depends on proper elimination.

Myositic headache is a more or less continuous dull, aching pain in the back of the head and neck which is increased by fatigue or strain. The finding of tender nodules in the scalp and in the posterior muscles of the neck confirms the diagnosis. It is best treated by continuous deep massage in the region affected.

The headache of encephalitis is best treated by repeated lumbar puncture, intravenous dextrose solutions and the judicious use of anodynes and narcotics. Meningitic headache may require similar means, but the epidemic variety is best treated by the intraspinal and intravenous injection of antimeningococcus serum. Headache due to syphilitic meningitis responds very readily to antisyphilitic treatment.

A DETAILED discussion of the various forms of epileptiform seizures would take us too far afield. It must, however, be emphasized that grand mal attacks are not absolutely pathognomonic of essential epilepsy, and Jacksonian seizures are not always indicative of focal brain disease. Generalized convulsions may occur in cerebral arteriosclerosis, general paralysis of the insane, eclampsia infantum and gravidarum, uremia, brain tumor, brain abscess, cerebral syphilis, meningitis, cerebral concussion, encephalitis and in the various forms of chronic and acute intoxications. In all of these conditions the generalized seizures may be preceded by Jacksonian convulsions. Attacks of petit mal and psychic equivalents of epilepsy usually occur only in cases of essential epilepsy. No physician should be satisfied with the diagnosis of essential epilepsy when the attacks have made their first appearance in a previously healthy individual after the age of twenty, until every effort has been made to exclude organic brain disease, especially brain tumor.

One of the most common neurologic conditions encountered in general practice is apoplexy. After the diagnosis of apoplexy has been established, the determination whether the latter is due to hemorrhage, thrombosis or embolism can be made only with a certain degree of probability. In some cases the degree may be so high as to almost reach certainty, or, so low as to amount to practically a little more than a guess. Whether an apoplexy is due to hemorrhage, thrombosis or embolism is not merely a matter of academic interest, but is important both for prognosis and therapy.

CEREBRAL hemorrhage is evidence of aging arteries, although thrombosis may and also does occur in advanced age. Either may occur with any change in the vessel walls but is especially frequent in endarteritis due to syphilis. Cerebral embolism may occur at any time of life from vascular or valvular disease, or from infectious foci anywhere in the body. In childhood and

in youth the spontaneous rupture of a cerebral vessel is relatively rare, meningeal hemorrhage (subarachnoid, or subdural) being much more common. The diagnosis of cerebral embolism depends upon the determination of the source of the embolus. The presence of endocarditis is not excluded by normal heart sounds, and under conditions in which it is common, such as chorea and rheumatism, embolus should be suspected even though its source cannot be definitely ascertained. In the later decades of life, when arteriosclerosis is more common, the association between valvular disease and apoplexy has less significance in indicating the existence of embolism.

It is safe to say that cerebral hemorrhage, especially if followed by paralysis, is accompanied in the vast majority of cases by loss of consciousness. Paralysis resulting from thrombosis is often developed slowly and gradually and without loss of consciousness. In embolism the development of the symptoms may be quite as sudden as in hemorrhage. From a practical point of view it is well to bear in mind that an apoplexy coming on with very deep coma may clear up and give a more favorable prognosis, in the end, than one ushered in without coma but with gradually deepening stupor. Generally speaking, however, increasing drowsiness after an apoplexy is a grave prognostic sign. At all events, no prognosis as to the ultimate outcome can be made safely in any case until after the lapse of from 24 or 48 hours. Any signs of returning consciousness within the first few days after an apoplexy are favorable as to the ultimate outcome. The secondary edema of the brain developing after hemorrhage or thrombosis is an important though uncertain factor both as regards the diagnosis and prognosis.

Spontaneous cerebral hemorrhage is, in most instances, due to aneurysmal dilatation of the vessels and hypertension, arteriosclerosis and renal disease being the main predisposing causes. Globus and Strauss have recently shown that in cases of massive cerebral hemorrhage there exist preexisting areas of softening or necrosis of the brain which make hemorrhage into its substance so much the easier. Whether aneurysmal or not, the walls of the vessels give way, and hemorrhage ensues.

IN recent years apoplectic seizures have been observed with increasing frequency in middle-aged individuals without any assignable cause, not even syphilis. Marburg (1928) investigated these cases histologically and he concludes that they are due to toxic or toxi-infectious changes in the vessel walls which may remain latent for a considerable period, but owing to sudden increase in blood pressure from excitement, overwork, or marked emotional strain, these defects in the vessel wall give way and produce hemorrhages in the brain. The bilaterality of symptoms in some of Marburg's cases suggests the possibility that they may be encephalitic in nature. I have personally observed a case in which the apoplexy was associated with bilaterality of symptoms and involvement of the extra and intraocular muscles; the subsequent course of the disease left no doubt that it was one of epidemic encephalitis.

Apoplectic seizures followed by transient paralysis may occur in uremia, diabetic coma, paresis and multiple sclerosis in which a hemorrhage occurs into a sclerotic patch in the brain.

Between the ages of twenty and forty most apoplexies are due to thrombosis from syphilitic disease of the cerebral arteries.

The character of the stroke itself may give some indication as to its cause. Premonitory symptoms, such as headache and dizziness, when they have been present for two or three days, especially if there is a history of previous slight cerebral attacks, suggest the gradual onset of a thrombosis. In cerebral hemorrhage slight premonitory symptoms may also precede the attack, but they are of much shorter duration, from a few minutes to a few hours, and there is usually a history of a previous apoplexy of considerable severity rather than of repeated slight attacks. Hemorrhage, however, may occur in the same patient after several previous attacks of thrombosis.

HEMORRHAGE may be expected when the circulation is active, i.e., when the blood pressure is high and the heart is acting very forcibly; thrombosis on the other hand may be expected when the pressure is low and the circulation sluggish. Thrombosis is more common during sleep and rest in bed. Arterial hypertension is an almost constant accompaniment of advanced arteriosclerosis and may precede and accompany thrombosis as well as hemorrhage, so that by itself it should not be given too much weight in the differential diagnosis between hemorrhage and thrombosis. On the other hand, a feeble, soft pulse with a weak, irregular heart points strongly to thrombosis. A marked drop in temperature immediately after an apoplexy speaks for hemorrhage, especially when such drop in temperature is associated with evidences of increased intracranial pressure. A slight rise in temperature after the stroke may occur in hemorrhage, is more frequent in embolism and very rare in thrombosis.

Convulsions, particularly if repeated in the course of a cerebral vascular accident, speak in favor of a lesion in or near the cortex and are much more frequent with hemorrhage and embolism than with thrombosis.

The clinical signs, mode of onset and early course of an apoplexy may so closely resemble those of encephalitis or tumor, especially of the infiltrating variety, that the diagnosis may be impossible unless recourse be had to encephalography or to ventricular puncture and some times even an exploratory craniotomy may be justifiable.

ANOTHER variety of intracranial bleeding which has within recent years attracted our interest, owing to the large number of cases which we have an opportunity to observe in Mount Sinai Hospital, is subarachnoid hemorrhage. The causes of bleeding into the subarachnoid space are: 1. Arteriosclerosis in which hemorrhage is the result of a degenerative sclerosis of the pial vessels. 2. Aneurysms at the base of the brain; these are not necessarily syphilitic in nature and may occur even in the first decade of life. 3. Syphilis giving rise to aneurysms, endarteritis or meningitis. 4. Transitory arterial hypertension in such conditions as epilepsy, tetany, tetanus, uremia, strychnine poisoning, chorea, pertussis and in infants during or immediately after birth. 5. Cerebral trauma or contusion. 6. Intoxications as lead, alcohol, carbon monoxide, etc. 7. The various meningitides and infectious fevers. 8. Hemorrhagic diathesis (leukemia, hemophilia, purpura, scurvy and pernicious anemia). 9. Tumors involving the meninges.

The onset of subarachnoid hemorrhage may be sudden or gradual.

In cases with sudden onset the patients complain of sharp pain in the back of the head and neck which is soon followed by severe headache, vomiting, unconsciousness varying in degree and duration, restlessness and excitement followed by a lethargy which may last to death. Simultaneously with these symptoms there ap-

pears a typical meningeal syndrome which may be associated with convulsions, general hypertonus, spastic or flaccid paralysis with increased, diminished or absent tendon reflexes, aphasia, papilledema and with other symptoms of brain and cranial nerve compression. The diagnosis is established by obtaining a uniformly bloody spinal fluid under increased pressure. The presence of blood in the subarachnoid space acts as an irritant to this serous cavity giving rise to a moderate leukocytosis and fever varying from 101 to 103 degrees. If the bleeding has ceased the spinal fluid becomes clearer with tendency to xanthochromia.

In cases with gradual onset there is a history of prodromata, such as headache, vertigo, tinnitus, and disturbances in sleep which are gradually and slowly followed by a symptom-complex similar to that observed in the acute cases. If the hemorrhage is due to a slow leakage from an aneurysm the symptoms may occur at intervals varying in duration from weeks to years with apparent well being between such intervals.

THE treatment consists of lumbar puncture to relieve the pressure, absolute rest in bed and the alleviation of the pain and restlessness.

Perhaps no diagnosis is made as frequently and as loosely as that of neuralgia. Neuralgia is not a disease; it is merely a syndrome. It is characterized by sharp pain along a nerve trunk or its branches. Generally the pain comes suddenly in paroxysms of varying duration and intensity with relatively complete relief in the intervals. The paroxysms may recur several times in one hour. The pain may be limited to one or several spots on the skin or it may spread from an initial point to several ramifications of the nerve. It may appear spontaneously or it may be brought on by the least touch, motion, cold air, chewing, etc. Another characteristic sign is the presence of the so-called Valleix points, which are small tender areas situated along the course of the affected nerve and its branches. In addition to these two cardinal points there may occur hyperesthesia or anesthesia over the area of distribution of the affected nerve, twitchings during the paroxysms (tic douloureux), secretory disturbances (salivation, hyperhidrosis, lachrymation) and vasomotor and trophic disturbances. Neuralgia is usually of long duration. It may after a certain time disappear completely or it may become chronic. When it is due to malaria it usually affects the first branch of the trifacial nerve or the sciatic nerve. In grippe the supraorbital nerve is most frequently involved. Neuralgia of diabetic origin has a special predilection for the sciatic nerve. Malarial and syphilitic neuralgias are usually amenable to therapy. The outlook is bad when there exists an unfavorable constitutional basis.

IN the treatment, the relief from pain and the removal of the cause are chief indications. The pain can be relieved by sedatives. Morphine gives almost immediate relief but its repeated administration is dangerous in view of the habit which is easily acquired. In many cases coal tar products with or without small doses of codeine are quite satisfactory. I have obtained good results from the use of diathermy. The use of electricity is futile. The general nutrition and an existing constitutional diathesis and neuropathic state must be taken special care of. The severe cases do not respond to any of these measures and injections of alcohol into the affected nerve at its point of exit through the bony foramina must be resorted to. In protracted cases of trifacial neuralgia the pain may recur even after repeated injections into the nerve and then the removal of the Gasserian ganglion is indicated. In treating a case of trifacial neuralgia it should be borne in mind that disease of the nose, ear, eye, teeth and sinuses may be the immediate cause of the neuralgia.

Another diagnosis frequently made with very little foundation in fact is that of neuritis, a term usually applied by some physicians and most patients to a variety of conditions whose chief symptom is pain. If a neuritis is of a mixed type, motor and sensory, or if of the sensory type alone, it will be associated with pain. The two most frequent types of neuritis, however, are examples of motor neuritis and hence unassociated with pain. These are facial neuritis (Bell's palsy) and neuritis of the musculospiral nerve. A mononeuritis involving a mixed nerve which gives rise to pain *only* is extremely rare. Neuritis of a mixed nerve, therefore, has as its chief symptoms pain along the course of the affected nerve, tenderness on deep pressure, objective cutaneous disturbances of the sensation of pain, temperature and touch, weakness or paralysis of the muscles supplied by it, diminished or absent tendon reflexes, and if the condition is at all severe, muscular wasting with changes in the electrical reactions.

A DIAGNOSIS of ulnar, median, or sciatic neuritis should never be made until all significant facts in the history and the signs and symptoms have been carefully sifted and properly evaluated. The chief causes of pain in an extremity aside from posterior nerve root involvement are arthritis and vascular disease. The condition most frequently called neuritis in an extremity is really an arthritis either of the shoulder, elbow, wrist, hips, knee or ankle joints. Deltoid bursitis is almost invariably diagnosed incorrectly as brachial neuritis. In addition to the X-ray and the physical findings in a diseased joint there may be found an atrophy of the muscles, especially the extensors, moving that particular joint. This type of atrophy appears quite rapidly and is usually associated with hyperactive tendon reflexes in contrast to diminished or lost reflexes in neuritis. Disease of the bloodvessels (endarteritis obliterans) as a cause of pain in the extremities is usually easily recognized; in this condition, however, a neuritis may appear *later* owing to circulatory interference with the nutrition of the nerves.

The pain due to disease of a posterior nerve root is variously described as sharp, shooting, cutting, or burning and is often aggravated by sneezing, coughing, straining or jarring of the body. The fact that a root pain is so frequently aggravated by sneezing and coughing may sometimes lead to an erroneous diagnosis of pleurisy or pleurodynia when the nerve roots involved are those in the thoracic region.

THE most common conditions that involve posterior nerve roots are in their order of frequency: Syphilis, disease of the vertebrae, herpes zoster, spinal tumors and tumors and aneurysms growing outside the spinal canal. Extramedullary tumors of the cord frequently grow from a posterior nerve root or involve it by pressure. Tumors outside the vertebral canal, such as neurinomas of the meninges as in Recklinghausen's disease, involve the roots by pressure. Syphilis affects the roots by producing a low grade localized meningitis as in tabes and in syphilitic meningomyelitis. Vertebral disease, such as spondylitis, Pott's disease, and carcinoma of the vertebrae, gives rise to radicular involvement by cutting down the size of the intervertebral foramina and by compressing the roots directly. Herpes zoster, or

posterior poliomyelitis, is usually due to an infection of the posterior root ganglia. Recent investigations would seem to show that the infectious agent of herpes zoster is a virus closely allied to that of chickenpox and encephalitis. The pain of herpes zoster may persist for months after the eruption has disappeared in spite of treatment. The relationship of lesions of the posterior nerve root ganglia to herpes zoster and neuralgic pains makes it imperative that acute posterior ganglionitis simulating acute surgical conditions in the abdomen be thought of by both internists and surgeons called upon to deal with such conditions.

THE explanation for the obscure motor and sensory disturbances occasionally found in an upper extremity may become easy by the detection of a cervical rib. All of you are probably familiar with the great difficulty that may be encountered in the diagnosis of cervical ribs. The great difficulty lies in the large number of other conditions that may easily be confused with them. Tumors in the angles of the neck or growing from the lower cervical or upper dorsal vertebrae may produce nerve symptoms in the homolateral upper extremity. Aneurysms of the subclavian artery may also give rise to similar symptom-complexes. Quite a number of cases of Raynaud's disease have been found to be due not to the vascular disorder of symmetrical gangrene but to vascular and neuritic changes secondary to cervical ribs.

Diagnostic blunders are strikingly frequent in cases diagnosed as sciatica. Physicians are constantly referring to the neurologist patients with the diagnosis of sciatica when in reality the pain in the sciatic distribution is due to disease of the pelvic bones or vertebrae and sacro-iliac joints, or to intermittent limping, pelvic adhesions following pelvic and abdominal disease or operation, disease of the ureter, myoma, rectal or prostatic cancer, and flat feet. In this connection it is well to remember that spondylitis, sacroiliac disease, stretching of the symphysis pubis in a wasting disease or in pregnancy, and senile hip joint disease may have as the first symptom pain in the sciatic distribution. Here again a careful history and thorough general and neurologic examination followed by X-ray studies will reveal the true nature of the difficulty. In sciatica the pain is generally worse on rising and on taking the first steps, while the reverse of this occurs in intermittent claudication. Bilateral sciatica is so rare that this diagnosis should practically never be made. Bilateral sciatica almost always indicates tabes or a spinal cord tumor.

MULTIPLE neuritis may be of the sensory, motor or mixed type. The mixed form is by far the most common and is due to alcohol, toxic agents, and infections. Occasionally an acute infectious disease or a deficiency disease (avitaminosis) may produce a polyneuritis which may be impossible to distinguish from alcoholic neuritis. Polyneuritis is characterized by severe pain and symmetrical wasting and weakness or paralysis of the distal parts of the lower and upper extremities, without involvement of the trunk. Occasionally the cranial nerves may also be affected. The pain is usually associated with nerve and muscle tenderness and with paresthesias and objective sensory disturbances distributed in the characteristic glove and stocking fashion. The sensory involvement affects mostly pain, temperature and touch and, in severe cases, the sense of position, vibration and deep sensibility. The paresis or paralysis is flaccid in type with diminution or loss of the tendon reflexes. The preservation of the sphincters and absence of fibrillations are important diagnostic features.

A symptom-complex deceptively simulating tabes even to pupillary changes may be encountered in chronic alcoholism and diabetes. A careful history with the ordinary laboratory examinations will aid in the diagnosis. These cases present unusual diagnostic problems when in addition to the neuritic phenomena there are also present mental symptoms which may resemble those of general paralysis of the insane. At this point it may perhaps be emphasized that the Korsakoff psychosis, characterized by euphoria, memory defects and confabulation, is not pathognomonic of chronic alcoholism but may be encountered in any of the subacute or chronic toxi-infections and in cases of trauma to the brain.

Modern intravenous and subcutaneous administrations of arsenicals have increased the frequency of arsenical neuritis. The latter resembles the neuritis of chronic alcoholism and is only distinguished from it by the features peculiar to arsenical poisoning in general, i.e., the gastrointestinal disturbances, the puffiness of the eyelids, the nasal catarrh, and the changes in the kidneys, skin, hair and nails as well as by the finding of arsenic in the excreta, hair and nails.

NEURITIS due to lead poisoning is common in painters, typesetters, compositors, lacquerers, and potters. Food poisining by lead may occur through lead-containing utensils and preserve jars; more remotely through tinfoil used in wrapping tobacco and chocolate, through pipe water from lead-containing water pipes and from snuff tobacco in which lead is used as an adulterant.

The symptoms of lead poisoning are familiar to all clinicians. It is usually associated with abdominal pain, obstinate constipation, the blue line on the gums, hypertension and arteriosclerosis, secondary anemia with basophilic stippling and decreased fragility of the red blood cells, and the presence of lead in the urine and feces. Headache, vomiting and trembling are not uncommon. In the severer cases, these symptoms may be associated with optic neuritis, delirium, convulsions, choreiform movements and mental deterioration—a symptom-complex unquestionably due to structural changes in the brain—a true encephalopathy, which may be very difficult to distinguish from brain tumor. Neuritis due to chronic lead poisoning is most frequently confined to the upper extremities, the extensors of the fingers being first affected, to be followed by involvement of the extensors of the wrist with the resulting wrist drop, and a sparing of the brachioradialis (supinator longus). Sensory disturbances are rare. Other nerves than those of the upper extremities may also be involved though this is not so common.

TYPICAL symmetrical sensory and motor involvement of all four extremities is very rare in diabetes mellitus. Diabetic neuritis usually involves one or more nerves of the lower extremities. Occasionally an entire plexus may be involved. Cord changes, similar to those observed in other wasting diseases, may occur. Owing to the associated cerebral arteriosclerosis, cerebral thrombosis and characteristic retinal and optic nerve changes are very common in advanced diabetics. The ataxia, pain, perforating ulcer and diminution or loss of the tendon reflexes in diabetes bear a close resemblance to true tabes. A further analogy to neurosyphilis is seen in the occasional paralysis of the third and sixth cranial nerves. The course of diabetic neuritis is generally of shorter duration than that of the alcoholic and arsenical types, but the duration and prognosis depend to a great extent upon the successful management of the diabetes itself.

As far as the pathogenesis of diphtheritic paralysis is concerned, it is immaterial whether the diphtheritic infection is faucial or extrafaucial. The paralytic phenomena bear no relation to the severity of the diphtheritic infection. They are more common after nasal than after pharyngeal diphtheria. Adults are more often affected than children. As a rule, the neuritis does not appear till convalescence has been well established and may be delayed much longer. The nervous symptoms may be limited to a local pharyngeal paralysis with regurgitation, difficult swallowing and a nasal voice. Loss of pupillary accommodation and loss of the knee jerks are the usual first symptoms of a post-diphtheritic paralysis. Some cases begin with a general polyneuritic symptom-complex, and although both motor and sensory fibers may be affected the former, as a rule, predominate. An ataxic form of diphtheritic paralysis has been described and sometimes the extraocular muscles and even those of the face, neck and trunk may be involved. So that, whereas the peripheral neuritic form is the most common, encephalitic and myelitic involvement may occur. Unless the respiratory and palatal muscles are severely affected the prognosis is, as a rule, quite favorable.

A neuritis of the cochlear branch of the auditory nerve occurs only in encephalitis, syphilis and intracranial neoplasm.

INSTANCES of indubitable polyneuritis on an encephalitic basis have been encountered by most neurologists in the last ten years. The radicular forms of encephalitis and those in which isolated nerve trunks, such as the facial or trifacial, are alone involved have been much more common. In the absence of a history of acute onset, diplopia and of the other classical signs and symptoms of encephalitis, the diagnosis of encephalitic neuritis or radiculitis is a most difficult one. The failure to recognize this form of encephalitis has led to useless operations for appendicitis, gall-bladder disease, and renal calculi. In one case in which the sensory branches of the trifacial were involved the frontal and ethmoidal sinuses were treated till the patient developed a typical Parkinsonian syndrome to which he succumbed.

CHANGES in the nervous system occur in 70-80 per cent of the cases of pernicious anemia. The neural symptoms may appear a year or *even two* before the blood picture and the achlorhydria, characteristic of the disease, make their appearance. The classical neurologic picture is that of a subacute combined degeneration of the spinal cord which may be associated with signs and symptoms referable to involvement of the peripheral nerves and brain. The well known paresthesias and sensation of "pins and needles" at the tips of the fingers and toes are the earliest symptoms; these are soon followed by disturbances in vibratory and joint sensibility giving rise to ataxia and finally by the symptoms of pyramidal tract involvement, such as hyperactive deep reflexes, positive Babinski and diminished or absent abdominal and cremasteric reflexes. It is well to remember that there is a distinct lack of parallelism between the severity of the blood picture and the nervous phenomena. It is also noteworthy that improvement in the blood picture and the gastric acidity following treatment by transfusion, tonics and the other older methods of treatment is, as a rule, not followed by improvement of the neurologic picture. Recently, however, it has been shown that liver therapy also affects favorably the lesions in the cord. This, however, needs further confirmation.

Degenerations in the nervous system, though of a different nature, are also observed in anemias which are not strictly of the pernicious variety, but in those due to leukemia, the purpuras, septicemia, bacterial endocarditis, malaria, cancer, tuberculosis, plumbism, Addison's disease, pellagra, syphilis and other devitalizing diseases.

Leukemic infiltrations in the brain, cord and meninges may be associated with hemorrhage and necrosis in these structures with corresponding neurologic signs. Epidural and dural infiltrations may be sufficiently massive to produce compression of the brain and cord.

The nervous sysmptoms encountered in Hodgkin's disease are the early appearing, generalized, uncontrollable itching which may be associated with a papular rash. Later in the disease there appear neuralgias and neuritides in various neural distributions; these are due to pressure of the glands on the deep or superficial nerve structures and their coverings. Unilateral dilatation of the pupil with flushing and sweating of the face on the same side, from pressure on the cervical sympathetic, and deafness due to nasopharyngeal infiltrations are not infrequent.

The nervous manifestations encountered in the polycythemias are: Pains, headache, dizziness, visual disturbances, motor and sensory disorders, muscular twitchings, convulsions, choreiform movements, speech disturbances, cerebral thrombosis with secondary softenings, mental and vasomotor and trophic disturbances.

NUMEROUS mistakes are made by overlooking the rôle of tabetic crises in patients complaining of cramps in the region of the stomach, gall-bladder, appendix or ovaries. While the commonest error is to mistake gastric crises for gastric or duodenal ulcer, the other mistake of overlooking a gastric or duodenal ulcer in a patient suffering from tabes or from some other form of neuro-syphilis is just as common. The lancinating pains in the legs in early tabes are too often wrongly attributed to rheumatism, neuralgia or neuritis. Attacks of tickling in the larynx, hyperesthesia of the laryngeal mucous membrane, attacks of coughing as in pertussis, spasm of the vocal cords, dyspnea and stridor are suggestive of laryngeal crises of tabes. Many a case of esophageal crisis is wrongly diagnosed as globus hystericus or cardiospasm.

To describe in detail the clinical manifestations of neuro-syphilis would entail a description of every disease of the brain, cord and meninges. Syphilis may affect any part of the nervous system at any time during the course of the disease.

THE meninges are perhaps most frequently involved. Such involvement is generally recognized by the positive spinal fluid Wassermann reaction, the pleocytosis and the increased globulin with the other usual signs of meningitis. Nocturnal headaches, vertigo, epileptiform and violent migrainous attacks may also occur. Transitory states of excitement and delirium are observed, especially in chronic alcoholics. Basal gummous meningitis is the most common form of syphilitic meningitis. It is a chronic affection characterized by periodic exacerbations and remissions of the signs and symptoms and by their ready response to antisyphilitic treatment. The most prominent signs and symptoms are: Headache, nausea, vomiting, vertigo, rigidity of the neck and pupillary disturbances. Periodic psychic manifestations are also common.

Symptoms suggestive of hypophyseal involvement such as polydipsia, polyuria, dystrophia adiposo-genitalis, acromegaly, dwarfism and hypophyseal cachexia may be due to cerebral syphilis, especially in congenital cases.

A very common form of neurosyphilis is cerebral vascular disease giving rise to thrombosis or hemorrhage

and followed by paralyses which are characterized by their transitoriness and ready response to antisyphilitic treatment.

TABES and general paresis rarely appear until ten or fifteen years after the primary infection. Characteristic early symptoms of paresis are psychic disturbances consisting essentially of gradual changes in intellect and personality. Memory defects, especially for recent events, errors in the work which the individual has been accustomed to perform, loss of acquired habits, indolence, indifference to the environment, loss of the usual prudence and reservation, defect in moral conceptions, together with either a state of depression or exaltation accompanied by euphoria, optimism and increased psychomotor activity are the conspicuous mental symptoms indicative of early paresis. As the disease advances the paretic loses insight into his condition and the sense of critique. Apoplectic, epileptic and aphasic manifestations, all of brief duration, are very common. Inequality and irregularity of the pupils with their sluggish or absent reactions to light or accommodation, tremor of the facial muscles and tongue and inability to repeat test phrases are the characteristic somatic manifestations of the disease. Changes in the deep reflexes are usually present but they cannot be considered characteristic features for diagnostic purposes. A positive Wassermann reaction in the blood and spinal fluid and paretic gold curve in the latter confirm the diagnosis.

After the diagnosis of general paresis has been established the physician must bear in mind the many important medico-legal problems of the disease, especially those of legal capacity and responsibility.

I know of no more difficult diagnostic problem than the differentiation between a frontal lobe tumor, early paresis, chronic encephalitis and cerebral arteriosclerosis. I have observed cases in which the diagnosis could not be established until encephalography or ventriculography or both had been performed. Very recently I saw a case in which only the microscopic examination of the brain settled the diagnosis.

Pupillary changes (inequality, irregularity and poorly reacting) which in my college days were thought to be absolutely pathognomonic of neuro-syphilis may occur in deep pontine and midbrain lesions, non-syphilitic in nature. Although the opposite of an Argyll-Robertson pupil is the more common pupillary finding in epidemic encephalitis a true Argyll-Robertson pupil may also occur.

It must be emphasized that the Wassermann reaction is more frequently negative in syphilitic cerebral endarteritis than in any other form of neurosyphilis, so that a negative Wassermann reaction in the blood and spinal fluid does not by any means put it wholly beyond question that the disease is not syphilis. The laboratory tests must be frequently repeated, particularly in patients who have been subjected to vigorous antisyphilitic treatment, or after a provocative injection of any of the arsenicals, and if consistently negative, the diagnosis of syphilis may be reasonably excluded as a cause of the cerebral or spinal lesion.

THESE remarks, fragmentary as they are, cannot be concluded without making reference to the thrash-baskets of diagnosis of obscure conditions, namely, the neuroses (hysteria, neurasthenia and psychasthenia). Before making a final diagnosis of any of these one must exclude incipient tuberculosis, diabetes, chronic intoxications, drug addiction, early paresis, cerebral arteriosclerosis, disease of the endocrine and vegetative nervous system, and dementia precox. It is well to remember that any of the neuroses may occur in very young children.

The vasomotor phenomena of the climacteric are too often ignored and attributed to hysteria or neurasthenia. In every case of hysteria, especially in young women with exaggerated tendon reflexes and ankle clonus, the possibility of multiple sclerosis should be thought of. These patients should be subjected to repeated painstaking neurologic examinations during which the presence of signs of pyramidal tract involvement with absent abdominals, nystagmus and temporal pallor of the optic nerves as well as the presence of sphincteric disturbances are to be looked for. A history of periods during which these patients are symptom-free is very suggestive of multiple sclerosis.

THERE is a variety of motor weakness, not a true paralysis, with a tendency to recurrence after mental or physical exertion, in the intervals of which the patient regains the normal power to execute all voluntary movements. After very moderate exertion the affected muscles become easily fatigued; this fatigue or pseudoparalysis wears off after an insignificant period of rest. The muscles most commonly implicated are those of the eyes, face, chewing, swallowing and speech. Temporary contraction of the visual fields and diplopia are quite common. In the limbs it is chiefly the proximal muscles that are involved. This condition is known as myasthenia gravis; it may last for months and years and carries with it a very grave prognosis. I have seen several patients afflicted with myasthenia gravis who had been diagnosed and treated for hysteria.

Hysteric trembling must be differentiated from the trembling of paralysis agitans. In hysterical trembling the oscillations are much grosser and are intimately connected with the patient's emotional processes and are easily overcome by suggestion and hypnosis. Propulsion and retropulsion by themselves will not exclude a diagnosis of hysteria. Paralysis agitans without tremor can be recognized by the mask-like facies, the peculiar wax-like muscular rigidity and the poverty and slowness of voluntary motility. Hysteria is a protean disease presenting such a great variety of symptoms that the danger of confusing it with other diseases is too well known to require further comment.

The boundary line between organic and so-called functional disease or the neuroses is entirely imaginary and artificial. A large number of patients are complaining of symptoms referable either to the head, heart, gastro-intestinal or genito-urinary systems which are merely somatic manifestations of some form of mental maladjustment. These patients do not realize the true nature of their difficulties; their symptoms are as vague as they are multitudinous and, the physical examination revealing nothing abnormal, they are told "to go home and to forget it because there is nothing the matter with them." The diagnosis that there is no organic structural disease may be correct, but this does not mean that the patient is to be ignored or that nothing can be done for him. The sufferings of these individuals are just as real to them as if they were due to organic disease. The failure to recognize early that the somatic complaints are an expression of a mental conflict which needs treatment just as much as a broken leg, an infected sinus or a decompensated heart breeds the army of chronic invalids that travels from physician to physician and from dispensary to dispensary, and finding no relief falls into the hands of charlatans, quacks and cultists.

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Early Symptoms of Chronic Diseases of the Central Nervous System*

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THE work of a policeman or fireman requires a man in the best mental and physical health possible, and for this reason all conscientious civil service examiners endeavor to weed out the unfit. The onset of a disabling pulmonary tuberculosis within a year of appointment is usually the result of an overlooked lesion at the time of appointment and is a disconcerting event for any examiner; but while the development of a disabling pulmonary tuberculosis is disconcerting, fortunately it is occurring less frequently. We have been taught to recognize tuberculosis earlier and as a result of earlier diagnosis treatment is instituted sooner, and the death rate from tuberculosis annually decreases although no new treatment has been elaborated.

Methods of treating syphilis have greatly improved in the last twenty years, yet in Philadelphia[1] the death rate from paresis has increased from 2.70 per 100,000 in 1914 to 7.07 in 1928, while in this same period the rate from tuberculosis has dropped from 188.2 to 84.38. Had the early signs of paresis been as thoroughly stressed the death rate would have decreased rather than almost trebled.

Neuro-syphilis is one of the most trying problems of the neuro-psychiatrist. We have at our disposal many effective methods of treatment but little impression has been made upon the death rate and little progress will be made until the front line soldier of medicine, the general practitioner, has been more thoroughly instructed in the earlier signs.

I will first consider the problem of tabes dorsalis. When locomotor ataxia has developed the tabetic is an invalid, but this ataxic stage of the disease is preceded by a long period of symptoms during which arrest or cure is possible and disability can almost certainly be avoided. The classical lancinating pain is known as a symptom to all of us, but more tabetics give a history of prolonged dull aching pains in the legs, that are made worse by cold damp weather, than tell of their lancinating leg pains worse at night. Paraesthesias often long precede even this rheumatic type of leg pain. It is unusual to see a tabetic that has not been treated for rheumatism, arthritis or neuritis over a period of months or years and it is usually not until the ataxia is evident that tabes is even considered. This is the stage of the disease most amenable to treatment but unfortunately many opportunities to benefit these patients are wasted by salicylates and allied therapeutic measures.

Other symptoms which may appear early in tabes are dimness of vision and other visual phenomena, headache, cranial nerve palsies, sexual impotence, bladder and rectal disturbances, trophic skin, joint or bone diseases and last but not least, abdominal pain with vomiting. I recall one patient who had four abdominal operations, all for gastric crises of tabes, when a study of his pupillary reflexes would have warned the surgeon.

The sequence of appearance of physical signs in tabes is variable but few tabetics are seen who do not have disturbance of the oculo-motor reflex, the patellar tendon reflex and some impairment of vibratory sensation, especially over the sacrum. Suspicion of tabes once aroused should not be dismissed until adequate serologic studies are negative, and spinal fluid examination I consider indicated when any of these physical disturbances are encountered. All rheumatic diseases, especially those limited to the lower extremities, should be studied with the possibility in mind of being tabes.

Unfortunately, as with tabes, there is no "characteristic early sign of paresis." If anything approaches being a characteristic symptom it is that syndrome which we call neurasthenia, an entirely subjective group of symptoms, namely, mental and physical fatigue, restlessness, irritability, inability to concentrate, emotional instability. The patent often describes it as a, "fed up feeling," and a lacking of interest in his customary pursuits. This, I believe, is the earliest and most frequent symptom of general paresis. Aphasic spells and paretic seizures are later symptoms, but even these may long precede the so frequently stressed "earliest sign of paresis", the character change. This is a purely objective sign and is first noted by family and friends and is long preceded by a neurasthenic group of subjective symptoms.

It is not necessary, in fact, I deem it unwise, to describe the late symptoms of these conditions. They are as helpful (to the patient) as are cachexia, loss of weight, root pains and a nodular enlargement of the liver as diagnostic signs in carcinoma of the stomach.

There is nothing characteristic of the mental picture of paresis, except the tendency to deteriorate. It may simulate any type of mental disturbance. Delusions of grandeur are as essential to establishing the diagnosis as is herpes labialis essential to the accepted diagnosis of pneumonia.

With a suspicion of paresis aroused much importance must be attached to the physical signs. The early physical signs are: disturbance of the pupillary signs, fine tremors of the eyelids, face, lips and tongue. Speech disturbance may occur and the tendency to misspell and shorten sentences in writing is worthy of mention as an early sign. The reflexes are disturbed, usually increased, but they may be normal or diminished.

In the treatment of these conditions prophylaxis is naturally the most effective measure. I feel that the time has arrived when the matter of venereal disease prophylaxis can be more freely and publicly discussed. I believe that it would be more desirable to have placed in all public toilets information from the United States Public Health Service on the

* From the Department of Neurology of the University of Pennsylvania, the Welfare Department of the Bureau of Public Safety of Philadelphia and the Philadelphia General Hospital. Read before the National Association of Police and Fire Surgeons and Civil Service Examiners September 23, 1930, in New York City.

dangers of the venereal diseases and measures of prevention, rather than to be assailed by advertising of So and So's specific for gleet and what have you. At least, public servants such as police and firemen may be instructed without outraging their fine sensibilities. Osler said, "Irregular intercourse has existed from the beginning of recorded history, and unless man's nature wholly changes,—and of this we can have no hope,—will continue." Is it not time to consider this question of public health?

The next most effective method of treatment is early and adequate treatment of early syphilis. I consider no one properly treated who has not had studies of his spinal fluid. The merit of malaria treatment has been well proven, but since the scope of this address is diagnosis I must simply recommend it for your own further consideration and investigation.

Another extremely chronic and distressing disease of the central nervous system which is frequently met is chronic epidemic encephalitis. The acute case with the characteristic somnolence or insomnia offers no great diagnostic problem but these are the exceptional cases. The large majority of cases of encephalitis are not recognized at the onset, and only as the Parkinsonian state becomes established are most of the cases recognized.

The established Parkinsonian state offers no diagnostic difficulty but the development is slow, and early objective symptoms present themselves so that many of these cases can be diagnosed many months before the time at which diagnosis is made at present. It is unfortunate that there is not a successful treatment for this condition at present but this does not excuse us from diagnosing it at an earlier stage. No treatment can be expected to restore the advanced case, but treatment, if applied early, may cure or arrest many cases. You men in particular must become familiar with the early diagnostic signs of this condition in order to remove men from duty that is dangerous to themselves and their comrades on a fire ladder.

In 1929 Ornsteen[2] reported on a very valuable group of hand signs in fragmentary forms of Parkinsonism. These signs are:

1. The posture of the fingers in repose. In the normal individual the fingers are very slightly flexed while in the incipient Parkinsonism the degree of flexion is increased. Since many of these cases are unilateral the two hands may present a contrast that facilitates diagnosis.

2. Finger spacing of the outstretched hands; normally the spacing and elevation is symmetrical while in the Parkinsonian state there is an asymmetry of spacing and elevation.

3. Thumb to fore-finger movements; with the index finger extended on both hands the other fingers are flexed into the palm. The tip of the index finger is then quickly and repeatedly touched to the top of the thumb and it will be noted in the Parkinsonian state that there is a rapid limitation in the degree of excursions and in the rate.

For the past year I have been observing all available cases of chronic epidemic encephalitis, and, noting those symptoms which were constantly present, have discovered that the following symptoms were present in all cases and occurred in cases in which no other signs existed. As the earliest symptoms are purely subjective these early objective signs are of great value. The subjective symptoms are restlessness, irritability, somnolence or insomnia, emotional disturbance, character disturbance, yawning and other respiratory disturbances and frequently visual disturbances.

All three of the signs as observed by me are the result of the extra-pyramidal rigidity with the resulting easy exhaustibility of movement. The signs are all referable to finely coordinated opposed movements of the cranial nerves, and are:

1. The blinking sign; the patient is told to blink as rapidly as possible. Normally the amplitude and rate of this movement can be kept constant for a minute or more, while in the individual with incipient Parkinsonism irregularity and a terminal fluttering movement in fixation soon develops. It is surprising how in many very slight Parkinsonian states not more than a few complete movements of this type can be performed.

2. The tongue sign; the patient is told to turn the tip of the tongue upward and place it behind the central incisors; with the mouth opened he then rapidly moves the tongue in and out of the mouth touching the teeth on each excursion. The Parkinsonian patient very quickly straightens out the tongue and the in-and-out movement slows down and finally becomes fixed with the tongue on the floor of the mouth or with the tongue against the lower lip. This sign is also present to an amazing degree in apparently very mild cases.

3. Smacking of lips; the teeth and lips are held firmly together and the lips are forcefully parted so as to make a smacking sound, repeated as quickly as possible. As a result of the increased rigidity and the lessened mobility the movements soon become ineffectual and cease.

All that is necessary to convince one of the value of these signs is to examine a group of cases of Parkinsonism and a group of normals; then by experience different variations of the normal and the definite abnormal performances can be recognized. They may precede by months any other objective symptoms of incipient Parkinsonism.

The cause of encephalitis is not definitely established. Evans[3] and Stewart working with the bacillus of influenza have done some very excellent work and attribute the cause to this organism. Their serologic studies of cases is more than coincidence and this work offers promise. They have treated cases with products of this organism but the period is too short to place any importance upon the results obtained.

The title of my paper implies a study of chronic nervous disorders to enable their earlier recognition, but I have limited myself to the two most frequent and advocate that the attitude of mystery toward diseases of the nervous system be dismissed and that you all familiarize yourselves with the essential details of a routine neurologic examination.

Summary

Syphilis is probably the most prevalent infectious disease and social position confers no immunity. Syphilis of the nervous system is not a therapeutically hopeless situation. Recognized early it can be satisfactorily treated in a large percentage of cases. Cases of arthritis, neuritis, etc., especially when confined to the lower extremities, should cause one to suspect tabes and the neurasthenic syndrome should be remembered as one of the earliest symptoms of paresis.

Epidemic encephalitis, judged by the increase in frequency of the fragmentary forms of Parkinsonism,

is increasing. The fragmentary forms present early objective and quite characteristic signs which should enable their earlier recognition.

In conclusion, there is one attribute without which even a detailed knowledge of these conditions would be useless in establishing early diagnoses. The most valuable single factor in the diagnosis, early, of these conditions is,—SUSPICION.

N. E. corner 36th and Walnut Streets.

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Prevention and Treatment of the Deformities in Anterior Poliomyelitis

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in about six months. One must always bear in mind that massage, muscle training, active and passive motion of the tendon, free from body weight, should invariably precede subjection of the joint to the heavier strain of the body weight.

3. To secure stability of flail and other more or less useless joints: This is usually done when so many muscles are paralyzed that transplantation cannot be undertaken. Arthrodesis, or the production of artificial ankylosis, is one of the methods used. It is of greatest service at the ankle joint where it may serve to fix the foot at a right angle to the leg. This should not be done in children under fourteen years of age, where the knee cannot bear the body weight, or on the knee in children on account of interference with the epiphyseal growth. Astragalectomy, as advocated by Whitman, has given excellent results in paralytic calcaneus. Osteotomy in some instances, especially in extreme deformities in the adult, has proven useful in overcoming resistant distortion.

SUMMARY AND CONCLUSIONS

1. Cases diagnosed in the preparalytic stage can, by means of convalescent serum, pass through the disease without developing paralysis in a large number of instances.

2. It is possible after paralysis develops, by mechanical means as splints, braces, manipulation, muscle training and massage, to prevent the occurrence of contractures.

3. In the later stages, we have at our disposal means such as manipulation, tendon transplantation, tendon fixation, arthrodesis and various bone operations to entirely correct some and improve probably the majority of the deformities that are usually met with.

1018 E. 163rd Street.

Common Neurologic Problems Encountered in General Practice

(*Concluded from page 349*)

PSYCHIATRY has only begun to liberate itself from the shackles of a complicated jargon which has contributed much to intimidate the general physician from making a mental approach in attempts to treat neurotic patients. Describing mental disorders and their mechanisms and naming them with long Latin or Greek names is generally being replaced by common sense interpretation of what these disorders mean to individuals afflicted with them.

When the patient himself, as an individual, is looked upon as an object of study and his happiness and efficiency considered as of just as much significance as his blood pressure, basal metabolism, renal function or the condition of his sinuses, various personal problems, be they financial, social, marital or sexual, will become objects of medical investigation which at the present time would seem to some physicians as outside of their sphere of usefulness.

To treat intelligently a patient afflicted with disease, be it organic or functional, one must make himself thoroughly acquainted with that individual's personality. Personality is a composite attribute which is the result of constitution and psychic make-up and their relation to the environment. An individual's personality also depends on what somatic changes are going on in the body and the relation of these to the glands of internal secretion and to the body metabolism as a whole. All of these factors are of vital importance in the consideration of the structure of every personality; none of them is independent of each other, and every one of them is influencing all the others. The structure of a patient's personality is of the greatest significance in the pattern and course which a given disease may assume in that particular individual. Disease is merely a reaction of the patient's personality to noxious stimuli. Successful treatment of a disease demands treatment of the patient as an individual and consists of a disintegration and correction of a vicious circle. In many, if not in a large majority of cases, the easiest or only place at which such disintegration and correction are best begun is the point where mental factors come into operation.

32 West 82nd Street.

An Aerial Importation of Communicable Disease

The increasing use of the airplane as a means of transportation involves added responsibility for the health officer in the control of communicable diseases. This was strikingly illustrated by a case of aerial importation of scarlet fever which was reported in a recent issue of *Westchester's Health*, as follows:

Recently an airplane left an adjoining state and while passing over the northern part of Westchester County "cracked up" and the aviator came to grief, finally landing in a cot in a local hospital. For a time his condition was serious, as a result of fractures, internal injuries and lacerations. As a part of the routine treatment, he was given 1,500 units of tetanus antitoxin and within eighteen hours developed a rash covering the entire body. Several physicians saw the case and called a diagnostician from the County Department of Health to make a differential diagnosis between a serum rash following the antitetanus inoculation and scarlet fever. He had no hesitation in pronouncing the case one of scarlet fever, his opinion based on the sudden onset, temperature of 104 degrees, an intensely inflamed throat covered with membranes and a characteristic rash appearing first on the chest and extending downward over the whole body.

This is the first known case of aerial importation of infectious diseases into the county and imposes an additional duty upon health officers. The increase of travel by air makes it incumbent upon them to be familiar not only with diseases common to their locality, but also with those endemic in far distant countries, since the time required for a flight from Central or South America is much shorter than the incubation period of most of the infectious communicable diseases.—*Health News.*

Treatment of Impetigo Contagiosa Neonatorum

Treatment of Active Cases.—The direct treatment of frank cases should be simple in character. Our experience indicates that a "dry treatment" is best. Ointments, which are effective in adults and children, are useless on the delicate skins of newborn infants and seem to favor extension. Cole and Ruh came to that conclusion sixteen years ago, but a review of the literature since then indicates that their observations have been largely disregarded.

Our plan of treatment is to open each vesicle with a cotton applicator dipped in alcohol and to swab the base of the lesion with a 5 per cent solution of silver nitrate. Taylor's dusting powder is then applied freely to the whole body as in prophylaxis, and subsequent new lesions are treated in the same way. —J. J. Swendson, M.D., and S. R. Lee, M.D., *J. A. M. A.*, June 20, 1931.

Postoperative Vicarious Chronic Menorrhagia Cured by X-Ray*

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THIS case is worthy of report and study. It is unique in these features: unbroken good health, notwithstanding five operations, blood-flow about every ten days for twelve years and obscure pelvic cellulitis. It is not unique in its response to nonoperative physical therapy whose action and results have long since been established beyond controversy.

Against obscure inflammatory deposits, such as pelvic cellulitis, iodine ionization is always beneficial and, as in this patient, frequently curative. In deep cellular infiltration, with or without tendency toward neoplasm (as in this patient's postoperative status), the actinic influence of the high vacuum tube is that of very mild X-ray and hence induces resorption of the exudate. True X-ray treatment associated with these two measures augments both and selectively stops or decreases neoplastic tendencies and is a powerful hemostatic.

There is nothing new in these therapeutic facts, hence the fine results in this patient are commonplace and not unusual in the work of those who for years have developed and applied these physical methods.

M. H., U. S., W., 45 years old, married, housewife; first visit October 4, 1928, case No. 15644.

Menses began at 14th year, 2-3 day type, 5-6 napkins daily, pain none, disability none. Never any tendency toward excessive or irregular menses.

Married at 17th year; 2 pregnancies, both children living, well, married and one a parent; 2 instrumentally induced abortions with complete recovery. Since childbirths menses have changed to 4-5 day type, 3-4 napkins daily, with pain in lower back slightly before, chiefly during the flow.

Her original disease began about 21st year during widowhood of first marriage. Through work of lifting coils of wire descent of uterus was increased to vulvar projection, "like a ball." Of course the cystic degeneration of the ovary and broad ligament, as described in the following history, had no relation to this severe work.

There have been five operations:

Operation 1. New York Hospital, August 2, 1911; curettage, perineorrhapy and ventral suspension respectively for endometritis, laceration of perineum, retroversion and prolapse. Discharged improved August 24, 1911.

Operation 2. New York Hospital, October 11, 1911; amputation for hypertrophy of cervix and perineorrhaphy for laceration of perineum. Discharged November 8, 1911; cervix and perineum healed, body firm. No bleeding during convalescence at all comparable with the long continued frequent bleeding hereinafter noted.

The patient insists that after Operation 2 she had pains similar to labor pains and "passed blood in pools and clots which the napkins did not hold." These conditions represented her 4-5 day menses, and were endured for 7 years.

Operation 3. Fordham Hospital, May 14, 1917, for removal of uterus, entire left ovary and part of right ovary, according to patient, and for prolapse of the uterus, according to a very meagre official report. (Like myself, the operator in Operation No. 5 did not receive a full report from the hospital but is inclined to believe that the uterus and annexa were removed. This corresponds closely with the patient's statements). Discharged May 30, 1917, cured.

After this operation patient still flowed at irregular intervals between menses: blood, "brown material", no mucus, some leucorrhea. Never free of napkins from 1917 to 1929. Flows appeared about every 10 days, sometimes every 5-6 days. Never foreseen, hence always used napkins day and night to avoid embarrassment. These flows were sudden gushes of about a wineglassful of blood.

Operation 4. St. Francis Hospital, April 17, 1922; posterior colpotomy for drainage of large right pelvic abscess. Discharged in excellent condition April 24th, 1922. According to the patient there has been more or less discharge, as from a sinus, ever since and up to the time of her treatment in my hands. This discharge duplicated and resumed that just described as to leucorrhea and blood.

Operation 5. Union Hospital, August 12, 1927, median laparotomy for large cystic tumor apparently in the right broad ligament, filling entire pelvis and lower abdomen up to the umbilicus and containing cloudy fluid. Mass ablated, abdomen closed without drainage. Discharged in about two weeks improved. Vaginal drains none, vaginal discharge none, vaginal bleeding none during hospital convalescence.

Pathological report: cystic ovary with papillary growth within its cavity. *Diagnosis*: papillary cystadenoma.

Since Operation 5 has always had discharge 2 or 3 times a month for 3 or 4 days, soaking 3-4 napkins with "dark, odorless, molasses-like blood." The patient insists that the qualities of this blood have always been that of menstrual blood.

July 23, 1928, she developed another abscess of pelvis lasting 4 days and spontaneously breaking on the 5th day with "copious, foul, greenish-yellow, followed by watery, discharge." Treatment: her surgeon sent her home to bed and directed ice-bags to the abdomen. In about 5 days pain and discharge had disappeared but, after this evacuation, the original discharges returned with definite but not troublesome leucorrhea. Bladder symptoms none. Urinalysis negative as to cystitis and nephritis.

Physical Examination October 4, 1928. General condition, health, strength, appearance excellent. Abdominal scars not adherent. Stump of operation on right side freely movable, not very tender and as large as a virgin uterus. Sinus looked for with largest bivalve speculum, widely opened in anteroposterior and lateral diameters of vagina and half-way between (four positions). No sinus and no point of discharge of pus or blood made out. One examination was made about one hour after a flow hoping to find clots in the sinus. No sinus found by operator 5 or by me.

Smears negative for any pathogenic organism. November 11, 1928, blood caught by patient in a cup showed only hemolyzed blood without cellular elements.

Treatment: Convinced that an obscure sinus must exist operative treatment was postponed and electrotherapeutic measures preferred, because chronic sinus conditions are usually operations of election and become operations of necessity only after nonoperative, notably physical measures, have failed. The introductory paragraphs of this paper contain the well-established reasons for ionization, high vacuum actinic action and X-ray.

From October 8 to November 16, 1928, the high frequency current through the glass electrode exhausted to the first degree of X-ray vacuum was applied to the right posterior fornix once or twice a week for thirty minutes with benefits as to pain, pus and bleeding.

This modality is sedative and hemostatic in mild degree, because of the fundamentally X-ray type of treatment. The first improvement in the bleeding occurred October 27th on the 19th day of treatment. No blood was reported until November 9th, a period of nearly three weeks. It was her first relief in 12 years, even for three weeks.

* Read before the Section of Obstetrics & Gynecology of the New York Academy of Medicine.

Ionization was given from November 19th to December 28th. Pain decreased. The blood copious only twice, moderate five times and absent three times at its usual intervals. This progress was her greatest in 12 years.

Ionization carries the substance used into the tissues a definite distance to the deeper layers not reached by applications on the surface. In a few minutes patients will note the tase of iodine in the mouth and sometimes that of any metal being used. Iodine thus used is most valuable in combating obscure infection, such as the pelvic abscess indicated.

The technic is simple. A distributing electrode is passed completely around the body as a flexible metal belt about three inches wide over the deep field and upon sterile towels soaked in salted water. Tightness for good contact is essential.

Instead of this belt electrode flexible metal electrodes 8 inches by 8 inches may be used, one behind and the other in front of the deep field and bent upward and downward along the side of the body as well as possible. Sterile towels wet in salted water should be next to the skin. The posterior electrode is held in contact by the weight of the body and the anterior one by the pressure of a sandbag.

A spherical or cylindrical carbon electrode is wrapped in 6-12 smooth layers of gauze soaked in a 25 per cent solution of the tincture of iodine water, having a little iodide of potash in it for maintaining the solubility of the iodine.

This electrode is passed through the vaginal speculum up to the deep field, held there by the operator's hand and, after the speculum is removed, clamped into position.

The negative pole is connected to it and the positive pole to the distributing electrode.

The current is turned on up to 10 M.A. (with preference for less) for 30 minutes. Proper action is revealed by the total or almost total disappearance of the iodine from the gauze. According to tolerance these ionizations are given from once to twice a week.

As the modified X-ray treatment through the high vacuum glass electrode had reached its limit, the standard X-ray was adopted so as to stop all hemorrhage and control, or possibly cure, the neoplastic tendencies of the stump of the operation.

X-ray was begun December 31, 1928, two times a week, cross-fire method, using the right and left suprapubic and perineal fields one after the other so that once in 10 days the same field was rayed again. The static machine X-ray was employed as being very penetrating and as having little tendency to injure the skin. After each deep raying the ultraviolet light was applied at 4 feet for five minutes further to protect the skin. A gas X-ray tube backing up a five-inch spark gap equal to a ten inch induction coil gas was used. The filter was 3 m.m. of aluminum and ⅛ inch of sole leather, distance 8 inches from target to skin, dose 60 milliampere minutes.

The first series of 12 treatments extended from December 31, 1928 to March 1, 1929. A long treatment with the arc light was given March 8 and the second course in X-ray begun on March 15 and ended June 3. Light was used as before as a corrigent of X-ray irritation of the skin.

All bleeding, all leucorrhea and all pain stopped and remained stopped as of April 1, 1929, at the third treatment of the second series, or at the 15th raying, or on the 91st day of the X-ray treatments as against 12 years of bleeding. The remainder of the series of rayings was administered, nevertheless.

Treatment was stopped on June 3rd and on June 29th she reported no blood, no breast signs and no flashes as of ovarian activity since June 3, 1929.

She made a monthly report of freedom from bleeding and any ill-health, except one bilious attack.

November 21, 1929: vagina clean, mass in right fornix smaller and more movable. Sexual life normal in all respects.

April 11, 1930, examined. She is now undergoing her third series of X-ray treatments, also directed to overcoming possible malignancy in the stump of the right ovary. The mass has reduced by at least half, possibly two-thirds its original size. It is movable and not tender.

A case such as this cannot be duplicated readily or numerously. But the principles underlying it are familiar pathogenetically and therapeutically, as already indicated.

Literature has been consulted because no gynecologist within my acquaintance has ever had a duplicate or even a parallel case. The results of a search of literature are these: This case of vaginal hemorrhage appears to be unique. It does not exactly fit into vicarious menstruation. Cases of the latter are difficult to prove for it is necessary to keep the woman under regular observation over long periods to show that uterine menstruation is suppressed, that the bleeding synchronizes with the periods (if menses are naturally regular), that uterine menstruation returns with correction of the extrauterine bleeding, etc. This case involves two special elements, continuous hemorrhage and bleeding in the absence of uterus and most of the ovarian tissue, in fact three special elements, although probably the persistence of some ovarian tissue eliminates the ovarian factor.

The exact action of X-rays on such dysfunction is difficult to state. Runge's[1] large monograph on the Roentgen therapy of gynecological affections is quite clear as to some of the problems while admitting great differences of opinion and of practice based thereon. If there is a known cause or causes of menorrhagia, he states, the Roentgen treatment, although not actually contraindicted, may be dispensed with in favor of casual therapeutics. There are many cases of what he terms essential menorrhagia—in which no causal factor can be isolated—in which the rays furnish a remedy of proved value, much depending on dose and technic.

He cites a great number of cases from literature in which experience is uniform that many such cases are either cured outright or improved or cured for the time. A majority of cases fall under this head although there are some total failures which cannot be explained. There is no doubt that the rays, according to dosage, etc., can cause total amenorrhea or reduce menorrhagia to a normal menstruation or reduce a normal to a scanty menstruation. The latter is, of course, a chance result. for one does not seek to render a normal menstruation abortive. Total suppression also is not often a desideratum but menorrhagia is common and the indication is to reduce it to a normal level, or one compatible with safety. Many specialists, however, are opposed to the rays in menorrhagia for fear of damage to the ovaries or ovum, should one be present in the uterus.

In regard to the use of Roentgen therapy in fibroids as a cause of menorrhagia benefit may be obtained although there are differences of opinion as to whether this is due

[1] "Praktikum der gynäkologischen Strahlentherapie, nebst einem Anhang über die Verwendung ger Röntgenstrahlen in der Genurtshilfe. Ein Lehrbuch für Frauenärzte, Röntgenologen und Studierende." Leipzig und München, O. Nemnich, 1921.

(Concluded on page 361)

Pendulous Breasts

Prevention and Surgical Repair

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New York, N. Y.

PROLAPSE of the breast in general is a biological fatality and an indication of physical decline in the female. This condition is distressing in young girls and matrons, in whom it occurs because of hereditary predispositions, pregnancies, lactation and the fads of dress characteristic of the present day.

This "old age" stigma being decidedly out of place in young healthy women is apt to bring about profound psychic disturbances. The reason for mental anxiety in these patients is easily understood and in itself, in my opinion, justifies surgical intervention. In addition to the esthetic, social and psychic disturbances, a clinical picture of physical distress is often present, which is especially marked in the hypertrophic type of breast prolapse.

Among the many symptoms caused by increased weight of the breast are circulatory disturbances of the gland, with all its attendant hazards, annoying dermatoses in the submammary region, and the complete scale of physical suffering which is well known to those who observe these patients closely.

It is surprising to note that in spite of the high frequency of breast deformities and the unquestionable need for relief, little interest has been shown by the surgical profession in this subject, particularly in this country. This indifference seems almost incredible in view of the universal interest in the physical perfection and normal development of the body through athletics.

The attention of the medical profession was called to this subject during the second half of the 19th century by Velpeau[1] (1857) and Pousson[2] (1897) followed by Morestin[3] (1909), who was the first to use the method of subcutaneous transposition of the gland; this procedure is still considered as one of the most satisfactory. During the last decade much has been written on this subject in French and German medical literature by Dartigue,[4] Lexer,[5] Joseph,[6] Kuster,[7] and others. Various operative procedures have been advocated for the correction of pendulous breasts, but most of these are only modifications which tend rather to confuse the original methods. Whatever surgical procedure is applied must first of all be based on the etiological factors responsible for the deformity and a clear understanding of the surgical anatomy of the region involved.

SURGICAL ANATOMY

The ideal normal breast is hemispherical in shape with the nipple placed at the center of the surface. Its lower border is marked by the submammary fold which forms a fixed attachment to the thorax.

THE SIZE of a normally developed breast varies between 30 and 40 centimeters in the base of the circumference. The vertical diameter extends from the third to the sixth rib, the location of the nipple being at the level of the fourth intercostal space.

THE VOLUME of the breast normally varies in different stages of life, depending upon the physiological condition. At puberty the breast increases rapidly in size and in a brief time attains full development. Ordinarily the left breast is more developed than the right.

THE SHAPE of the breast also varies in individuals in different stages of life, and is predisposed to prolapse when of the narrow type. The breast with a large base has less tendency to ptosis. In old age, due to the gland becoming atrophied, the breast retrogresses to an almost empty bag of skin.

FIXATION: Normally, the skin is intimately connected with the underlying gland by fibrous prolongations (the ligament of Cooper) which penetrate the superficial fat layer. The close connection of the skin with the underlying gland is partially responsible for the steadiness and firmness of the breast. The skin of the areola, which is of extremely fine texture, adheres to the underlying smooth muscular structures without the interposition of fat tissue. As this muscular layer is responsible for the erection of the nipple, it should be preserved when the circular incision is made in this area during a plastic operation. The subcutaneous fat tissue surrounding the gland is divided into the anterior (premammary) and posterior (retro-mammary) layers. The premammary layer is highly developed except during lactation, when it undergoes marked atrophy and is the seat of ramification of blood vessels and nerves. The retro-mammary fat layer accounts for the loose connection of the breast with the thorax. In young virginal breasts, this cellular tissue is covered by a strong aponeurosis extending to the clavicular bone and forming the so-called suspensory ligament of the breast. The elongation of this ligament, due either to the weight of the hypertrophic breast or to the excessive pressure of brassieres, is one of the causative factors in breast prolapse.

BLOOD SUPPLY

Extensive undermining of the skin with excision of the subcutaneous fat tissue and, if necessary, the gland itself, requires a thorough preservation of the blood supply. This is provided by the thoracic lateral, internal mammary and the intercostal arteries. The first two supply the skin and the superficial gladular tissue, and the intercostal arteries the deep glandular structures. There is a superficial vascular anastomosis around the areola providing the blood supply for the nipple and the superficial parts of the gland, and another for the deeper parts of the organ. The veins for the most part correspond to the distribution of the arteries. Those on the superficial surface of the gland are liable to assume a very large size in inflammatory conditions and in pronounced hypertrophy. They can be plainly seen coursing under the skin to join the axillary and internal mammary veins, and sometimes passing upwards directly over the clavicle to join the veins at the root of the neck.

CLINICAL MANIFESTATIONS

The deformity discussed here occurs not only in multiparae, with numerous pregnancies, but also in young

girls with marked hereditary predisposition to ptosis. In order to conceal this deformity those afflicted usually wear brassieres designed to flatten the breast against the chest and consequently the ptosis becomes more accentuated. In the hypertrophic type, which usually consits of a diffused adiposis, the weight of the breast becomes unbearable. The patients usually complain of a dragging sensation around the shoulders and chest, which is not relieved in a reclining position, during which the breasts are displaced laterally.

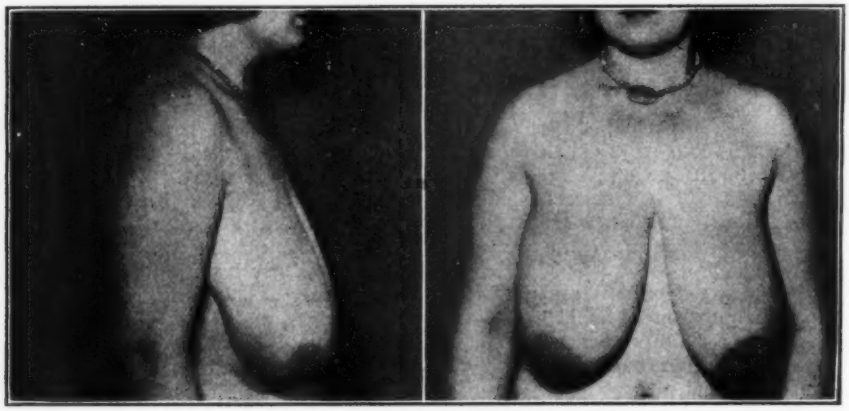


Fig. 1—Multipara age 31 with hypertrophic and pendulous breasts extending to the umbilicus. Main symptoms consisted of pain and dragging sensation around chest and shoulders, faulty posture and kyphosis. Annoying dermatoses in the retromammary folds, especially during warm weather. Pronounced phychic disturbance. With the exception of the deformity of the breast the bodily development was altogether normal.

Faulty posture with kyphosis is usually present and a resulting malformation of the dorsal vertebrae has been reported. The skin of the breast is as a rule extremely distended and affected with maceration, eczema and other dermatoses. Pronounced stasis of the breast gland is often responsible for the presence of chronic mastitis and the formation of nodules. These circulatory disturbances with the resulting pathological manifestations should be considered as potential factors in the development of malignancies.[8] The excision of the nodules alone is not an adequate surgical procedure, as they are only an isolated manifestation of breast ptosis and chronic mastitis.

PSYCHIC DISTURBANCES: Great mental distress is usually present in patients thus afflicted and is especially pronounced in professionals, as singers. actresses, and dancers. It is obvious that this type of patient is seriously handicapped in the pursuit of her vocation. Nor is this the only class of women in whom the presence of breast prolapse may be of serious consequence. Any young girl or matron becomes conscious of this physical imperfection as it not only interferes with her social and professional activities but also inflicts on her an inferiority complex. These patients are unable to participate in various sports where complete freedom of body movement is essential. The effort to conceal their deformity in adjusting themselves to the prevailing mode of dress may become in itself extremely painful.

ETIOLOGY AND MECHANISM OF BREAST PROLAPSE

The conically shaped breast is in itself predisposed to prolapse. A hemispherical breast with a large base is less inclined to displacement than the conical type. Other contributing factors are the weakness of the retromammary fascia and poor resistance of the skin, which give way under the weight of the gland; the suspensory ligament and the skin are often stretched by the wearing of tight brassieres. The increase in volume and weight of the breast in pregnancy and during lactation is frequently responsible for a market prolapse. Localized or general adiposis may have the same effect.

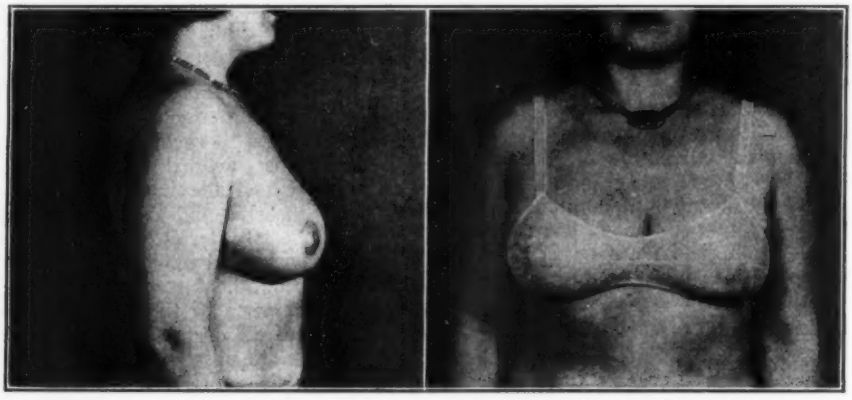


Fig. 2—Same patient as in Figure 1. Reconstruction of breasts by the method of subcutaneous transposition of the gland. Condition three weeks after operation; note inconspicuousness of incisions placed in the submammary fold and around the nipple; the transposed areola is normal in shape and smaller than originally. The gland is firmly affixed to the pectoral muscle.

The mechanism of ptosis consists of the shifting of the base of the gland along the thorax with an elonga-

tion of the suspensory ligament of the breast; at the same time the skin covering becomes distended, covered with fine striae and the breast is displaced in toto on the thorax wall with its upper portion tilted downwards. The elastic resistance of all suspensory components of the gland diminishes gradually until its maximum degree is attained. The fibrous prolongations (the ligament of Cooper) which penetrate from the skin into the gland are also involved in the process of elongation and the gland finally displaced from its normal bed is found lying at the bottom of the distended skin sac. The chest

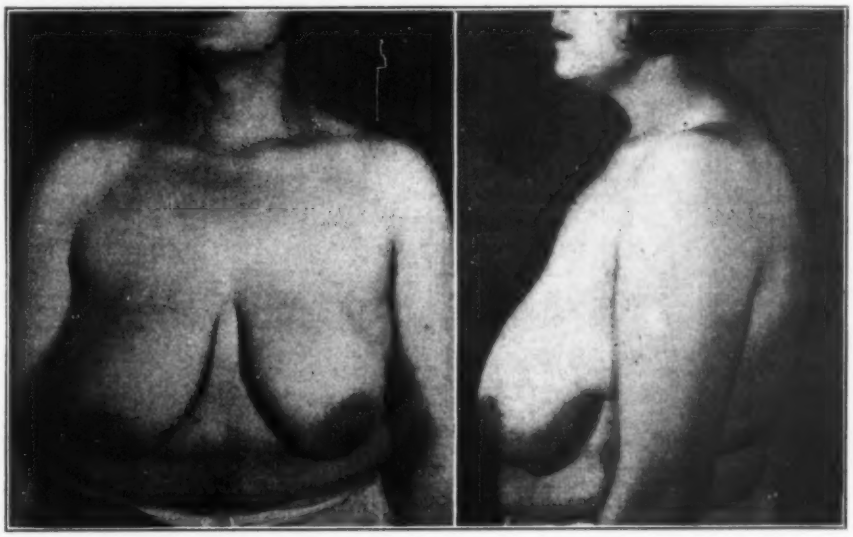


Figure 3—Nullipara age 22, actress, with highly pendulous atrophic type of breasts. Chief symptoms consist of pain around shoulders and chest with pronounced faulty posture. Patient experienced considerable difficulty in adjusting herself to the prevailing mode of dress. Marked psychic depression. Because of this deformity patient met with much difficulty in the pursuance of her stage career.

becomes flattened or even concave when the shoulders sag under the increased weight of the breast.

Classification of Breast Deformities

The following as types of deformities are to be considered:

1. True Hypertrophy of the gland (rare).
2. Hypertrophy of breast with fatty degeneration.
3. Atrophic breast.
4. Congenital malformations of the breast.

The majority of breast deformities are of the hypertrophic type with fatty degeneration, and the atrophic type, the other two varieties being rare.

1. True Hypertrophy of the breast is a pathological manifestation, the cause of which is as yet undetermined; it is accompanied by a marked increase in glandular structures with only slight increase in fat tissue. Billroth gives the following symptoms as characteristic of the true breast hypertrophy: (a) Appearance of the deformity immediately after the first menstruation; (b) Complete development of the deformity in a few months after its onset; (c) The relatively small size of the areola and nipple which do not share in the duffused hypertrophy. Amputation of this type of breast is indicated, as it often attains enormous proportions and a great amount of gland tissue must be sacrificed.

2. Fatty Hypertrophy is very common and frequently exists without a generalized adiposis. The fatty tissue involves mostly the lower portion of the breast with maximum development around the external lower quadrant. Velpeau in 1857 was the first to call attention to stasis and edema caused by hypertrophy of the breast and which he named "engorgement hypostatique." (Fig. 1, 2).

3. The Atrophic Breast is a sign of senile involution and generally occurs after the menopause. Breasts of this type have become comparatively common also in young girls and matrons, especially during the last decade since the vogue for slender figures; it is usually brought about by rapid reducing through rigid dieting and by the wearing of brassieres which flatten the breast. Through dieting the breast is deprived of its subcutaneous fat and the skin not being able to adapt itself to the reduced size of the gland, takes on the appearance of an empty sac. The same condition frequently results from rapid loss of weight and often follows chronic and acute generalized diseases. (Fig. 3, 4).

4. Congenital Malformations of the Breast. There is an hereditary tendency in all congenital malformations of the breast. Asymmetrical breasts and supernumerary nipples are the most frequent malformations observed.

Treatment of Prolapsed Breasts

Preventive and Conservative Measures: The preventive measure to be applied, especially in young girls, consists of avoidance of the use of tight brassieres, which forcibly distend and traumatize the suspensory apparatus of the breast. A prophylactic measure for young married women during pregnancy and lactation consists in the use of properly adjusted non-distensible supports for the physiologically enlarged breasts. The danger of rapid reducing by starvation, and its subsequent effect on the entire system, as well as on the contour of the breast, should be properly explained to the potential victims of this fad. In the slight atrophic type of breast caused by a starvation diet or following a prolonged general disease, the contour of the breast may be partially reestablished by a general increase in weight and proper support.

Surgical Repair

Once the highly hypertrophic or atrophic type of breast deformity is definitely established, the only effective means of remedy is through surgery, the object of which is to restore the breast to its normal size and

location. To be successful, this surgery must attempt the correction of most of the factors involved in the etiology of the prolapse.

REQUIREMENTS FOR THE METHOD OF CHOICE: The following requirements are essential to this surgical reconstruction.

1. The method used must reduce the size of the breast proportionately in all its diameters in case of hypertrophy;

2. The gland should be firmly affixed to the underlying muscles in order to insure its proper position and prevent recurrence;

3. The technic of the procedure should not endanger the blood supply of the breast, thus exposing it to partial or total necrosis;

4. The function of the breast should be preserved as completely as possible by the avoidance of extensive injury to the galactophorous ducts;

5. The surgical procedure should not leave conspicuous scars which necessarily lessen the cosmetic result;

6. Last but not least, the artistic element in the reconstruction should not be overlooked, as the cosmetic result must be satisfactory to both patient and surgeon and leave as little evidence of surgical intervention as possible.

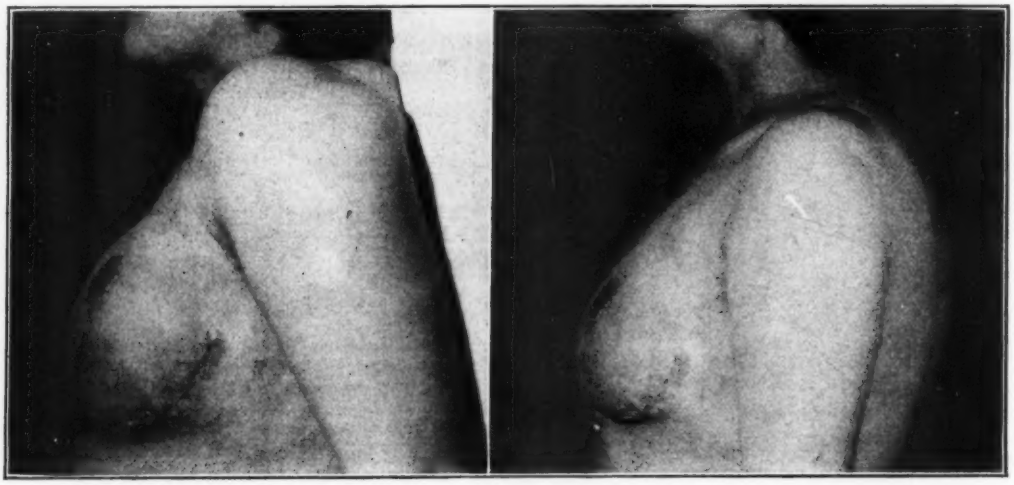
The surgical procedures advocated today for the relief of the hypertrophic and atrophic breast condition may be divided into four groups. I will not deal at length with surgery of ptosed breasts here, as a separate paper on this subject is in preparation. I shall confine myself to a brief review of the principle surgical methods advocated and the procedures of choice.

AMPUTATION

1. For obvious reasons this radical method cannot be considered as satisfactory either to the surgeon or to the patient. Amputation leaves in its wake a permanent deformity more unsightly than that which it replaces; moreover, it subjects the patient to a great psychic shock and exposes her to the suspicion of having been operated upon for a malignant condition. In the true hypertrophic breast, which is rare, amputation is indicated.

2. METHODS BASED ON DIFFERENT TYPES OF SKIN EXCISION WITH OR WITHOUT PARTIAL MASTOPEXY

These are the procedures first used in plastic surgery of the breast and should be relegated to the discard. To this group belong the procedures of Pousson, Verschere[10] and Dehner[11], which consist of excision of skin and fat on the anterior surface of the breast above the nipple with partial fixation of the gland to the second or third ribs. None of these procedures provide for the removal of the exuberant fat and glandular tissue which is usually localized in the lower half of the breast, nor for the exact modelling of the deformed part.



(A) (B)

Fig. 4—Same patient as in Figure 3—showing condition ten days after correction by subcutaneous transposition of gland and nipple. The diminished breast was firmly affixed to the pectoral fascia in a normal position. The scars around the nipple and in submammary fold are now (six weeks after operation) scarcely visible. A—Photograph—B of patient in horizontal position shows the complete fixation of the breast. The pigmentation of the skin shown in photograph was caused by light treatmen. The physical and mental improvement of this patient was highly gratifying.

The procedure of "lifting" the breast by repeated skin excisions at the proximity of the areolar region is inevitably followed by recurrence of the prolapse and distended disfiguring scars.[12]

3. METHODS BASED ON THE OPEN TRANSPOSITION OF THE NIPPLE AND PARTIAL EXCISION OF THE BREAST WITHOUT MASTOPEXY

The procedures of Lexer-Kraske and Joseph belong to this group. In both of these methods the areola is transposed upwards after excision of an oblong fragment of skin.

The upper suspension is purely cutaneous and no mastopexy is done. In the procedure of Lexer-Kraske an elliptic section of fat and glandular tissue is excised vertically from the inferior pole of the breast. This excision is dangerous because of its proximity to the deep blood supply, and many cases of partial and complete necrosis of the gland following this procedure have been reported. This method is also followed by an abnormal protrusion of the breast which is most unsightly.

Joseph operates in two stages with the purpose of insuring the vitality of the transposed areolar part of the breast. He does not completely separate the nipple from the surrounding skin but leaves it in continuity with a wide posterior pedicle. In the second stage the exuberant part of the lower half of the breast is removed by a horizontal elliptical excision of fat and glandular tissue with the suture line in the submammary fold. This technic adds an unnecessary operative stage,

does not provide for sufficient fixation of the gland and leaves conspicuous scars. Although the procedure of Joseph has not given the most satisfactory esthetic result in my hands, its use may be indicated in the highly hypertrophic type of breast as an additional precaution for the preservation of the vitality of the transposed gland.

4. Subcutaneous Transposition of the Gland With Fat Resection and Mastopexy Procedure of Choice

I have used this procedure in the hypertrophic, as well as the atrophic type of breast prolapse, as it provides most of the requirements for a satisfactory reconstruction. The principal incisions on the anterior surface of the breast and around the nipple are made in such a way

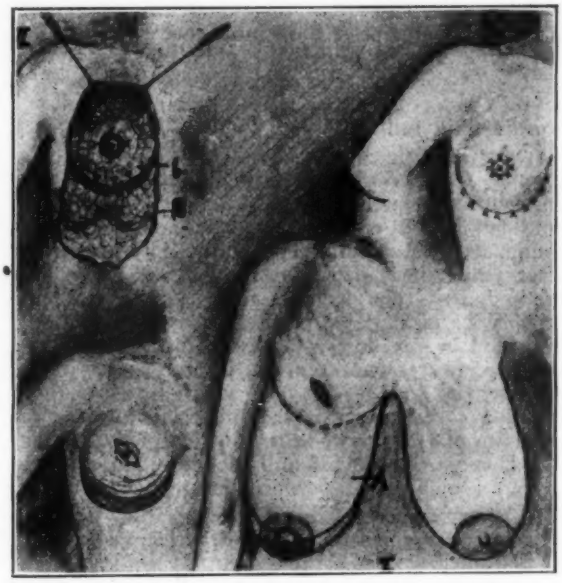


Figure 5—I. Showing the outlined anterior flap A and the location of the skin excision for the transposition of the nipple. The dotted line designates the submammary fold. II. Showing the retraction of the dissected anterior flap A and the gland affixed at its upper and lower borders to the pectoral muscle; B—posterior flap, to be excised together with fat and glandular tissue, still attached to the submammary fold (b). III. Condition after excision of the posterior flap B and adjustment of the Flap A over the affixed breast; an oblique elliptical excision of the skin is made at the level of the nipple. Dotted circle shows position of the areola under the skin. IV. Showing the areola sutured in its new position and closure of the submammary incision.

as to render them inconspicuous. (Fig. 5.) The outlined flaps A and B, after dissection, freely expose the underlying ptosed gland without injury to the blood supply, which is preserved, especially around the nipple and on the posterior surface of the gland (intercostals). All the superfluous masses of fat are resected symmetrically without injury to the galactophorous ducts; glandular tissue which has undergone fatty degeneration as well as nodules due to chronic mastitis are excised when present. There is no indication for excision of fatty or glandular tissue in the atrophic type of prolapse. The gland is then affixed to the pectoral fascia with a circular row of chromic catgut sutures. After reduction and fixation of the gland, the nipple with the reduced areola is sutured to an opening made in the skin flap. After proper adjustment to the underlying gland the free border of the flap is sutured to the submammary fold.

Summary

1. The hypertrophic and atrophic ptosed breast is a biological fatality which, being a stigma of old age, is out of place in young women.

2. In addition to the esthetic, social and psychic disturbances, a clinical picture of physical distress is invariably present in the hypertrophic breast prolapse.

The stasis of the breast due to the disturbance in blood circulation is frequently responsible for chronic mastitis and formation of nodules, a condition which predisposes to the development of malignancies.

3. Hereditary tendencies, the wearing of tight brassieres, forced dieting, the increase in volume of the breast during pregnancy and lactation are the principal etiological factors responsible for the deformity.

4. Prevention of this deformity consists of prophylactic measures to be applied during pregnancy and lactation, by a proper support The wearing of tight brassieres and rigid dieting by young girls for the sake of fashion should be condemned.

5. The surgical repair of the highly oversized and atrophic type of prolapsed breast is best accomplished by a method of choice consisting of subcutaneous transposition of the gland and nipple with mastopexy.

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New Meningitis Organisms Discovered

During the last five years there has been more epidemic cerebrospinal meningitis in the United States than at any time since the World War. A wave has traveled slowly across the United States from the Pacific Coast, Dr. Sarah E. Branham of the National Institute of Health said, in remarking on the discovery. This wave manifested itself in severe outbreaks in many centers of population—as Salt Lake City, Chicago, Memphis, Detroit, Indianapolis, Philadelphia and New Haven.

The new group of meningitis germs was found while Dr. Branham and her co-workers were endeavoring to find an improved serum for the treatment of this disease. They were engaged at the time in examining more than 400 cultures from epidemic cerbrospinal meningitis collected from various sections of the country where flare-ups had appeared.

Apparently there are spontaneous outbreaks sometimes widely separated, because only a few individuals out of many persons who may carry the germs in the respiratory tract actually may contract the disease. These carriers, though, may spread the infection.

Germs are grouped according to "strains." Some are very virulent and so more apt to cause a fatal form of the disease than others. More than 50 per cent of the cases in the recent epidemics have been fatal in some localities, while elsewhere deaths have been fewer.

Although primarily a disease of children, epidemic cerebrospinal meningitis affects adults also, especially those living under crowded conditions and following a radically changed routine of life. Such conditions aided widespread and fatal outbreaks during the World War among soldiers here and abroad.

Although the "meningococcus" was discovered by Weichselbaum in 1887, the fact that all strains are not alike was first recognized by the French bacteriologist, Dopter, in 1909, and recognition of the first four groups of the germs was made by Dr. M. J. Gordon, a British physician and his co-workers, during the World War. The majority of the "strains" sent to the National Institute of Health during the recent epidemics in the United States have been found by Dr. Branham and her associates to fall into the four groups of Gordon. The new fifth group has been found to be predominant in some parts of the Middle West.—*The New York Medical Week.*

Powdered Milk and Peptic Ulcer

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MILK has long been recognized as the most important factor in the medical treatment of peptic ulcer. "Milk always comes first," writes McLester[1] in his discussion of the dietary management of these ulcers, "it should be the sole food in the beginning, the mainstay of the diet as treatment proceeds, and an important adjunct to the menu for many years after the 'cure' has been completed."

The unique value of milk in the treatment of gastric and duodenal ulcers, as well as in other intestinal disorders, is due to the easy digestibility of this food, the fact that it produces an alkaline reaction, and the unsurpassed nutritional qualities derived from a relatively small quantity. Milk has appropriately been called "the most nearly perfect food", because it is the only single dietary article which in itself contains practically all of the elements, fat, protein, carbohydrate, minerals, vitamins, and fluids needed in human nutrition.[2]

Toward the end of the last century, the classical treatment of peptic ulcer with a milk diet was devised by von Leube, who employed it with much success in more than 1,000 cases. In 1904 this method was modified by Lenhartz, who increased the protein content of the diet by the addition of eggs, and raised the caloric yield in the later course of the treatment by giving other foods. In 1915 Sippy reported a further modification which he had been using with much success during the twelve years preceding. The Sippy method is the one now most extensively employed in medical practice, although various other modifications of it have been proposed, and a valuable regimen for ambulant patients has been worked out by Alvarez.

In the Sippy plan of diet, which begins at once without a period of starvation, the peptic ulcer patient receives three ounces of a mixture of equal parts of milk and cream every hour from 7 a.m. to 7 p.m. After two or three days soft eggs and cooked cereals are gradually added to the diet, until at the end of ten days the patient is receiving each day three soft eggs, one at a time, and nine ounces of cooked cereal, three ounces at a time, in addition to the milk and cream mixture which is the basis of the diet. As progress is made, other soft foods, such as vegetable purees, may be included. Midway between the hourly feedings, alkalies such as sodium bicarbonate and magnesia or calcium carbonate are administered, taking care, however, to avoid the production of alkalosis.

Although the quality and grade of the milk to be used in this standard treatment is seldom specified, this is a matter of considerable therapeutic importance. Since raw fluid milk forms a large, tough curd which tends to stimulate gastric secretion, boiling of the milk is suggested by some authorities. If pasteurized milk is employed, the boiling is generally unnecessary, and can be obviated entirely by the use of evaporated milk. This product, which is reliquefied to whole milk merely by the addition of an equal amount of pure water, is much more digestible than fluid milk and makes a bland diet. It has the added advantage that the concentration may be changed by altering the proportion of water.

Powdered whole milk is particularly efficacious in the treatment of peptic ulcer. Like evaporated milk, it has a finely divided curd which combines readily with the gastric juices and thus is digested with a minimum of effort. Unlike evaporated milk, from which about 60 per cent of the water has been removed by a vacuum heating process, powdered milk contains less than 2 per cent moisture. It may, therefore, be reliquefied in any strength desired, the proportion for whole fluid milk being one level packed tablespoonful of the powder to two ounces of water. A quart of fluid milk is prepared by vigorously mixing 4 ounces of milk powder with 29 ounces of water, preferably boiled and cooled. A pound can of powdered milk will make a gallon of normal fluid milk.

A standard dried milk, such as Klim, which is a Council-accepted product, is manufactured from whole milk from tuberculin-tested cattle. After suitable laboratory examination, the milk is partially condensed in a vacuum, and then rapidly pasteurized, after which it is dried by the Merrell-Soule spray method. In this process, the partially condensed milk is forced under pressure through a fine nozzle, pin point in size, into a large tin-lined chamber. As the fine spray of milk enters this room, it is met by a current of hot, filtered air, which removes the remaining moisture from the milk, leaving the milk solids to fall like snow to the bottom of the chamber. The powder is removed and packed in tin containers by a vacuum process which insures stable keeping qualities.

The composition of Klim powdered whole milk is as follows:—

	Percent
Fat	28.0
Protein	26.7
Lactose	38.0
Minerals	5.8
Water	1.5
	100.0

This dried milk gives 149 calories to the ounce, or 42 calories to a tablespoonful. Although not sterile as is evaporated milk, it is low in bacteria, averaging about 3,000 non-pathogenic bacteria per cubic centimeter. The manufacturing process causes no appreciable loss in the nutritional qualities, although there may be some slight reduction in vitamin C.[3]

Another dried milk product of distinct value in the treatment of peptic ulcer is powdered whole lactic acid milk. It may seem paradoxical to mention an acid milk for use in a condition in which alkalinity is desirable, and yet the effect of a lactic acid milk is highly beneficial. By supplying its own mild acid in the proper hydrogen ion concentration, the effect of this milk is to prevent stimulation of the gastric secretions, and thus inhibit the production of hydrochloric acid, which may adversely affect the ulcer.[4] Crohn and Reiss[5] have shown that the control of gastric motility is more important than the neutralization of gastric acidity. When powdered lactic acid milk is ingested, the stomach is not called upon to secrete acid to overcome the buffer action of the

milk, and digestion proceeds without the customary delay and with little effort.

Powdered whole lactic acid milk is made by souring pure whole milk with fresh cultures of *S. lactis*. After the desired acidity has been developed, about the same as in normal breast milk, the milk is dried by the Merrell-Soule spray process. Some of the beneficial lactic acid producing organisms remain viable and are implanted in the lower gastro-intestinal tract when this product is consumed, especially if beta-lactose is fed with the milk. The establishment of a favorable intestinal flora is an advantage in peptic ulcer, as it is in cases of irritable colon and other intestinal disorders. The same result obviously cannot be obtained with a lactic acid milk made with U. S. P. lactic acid.

The composition of a powdered whole lactic acid milk, made by culturing, is as follows:—

	Percent
Fat	28.00
Protein	26.50
Lactose	32.50
Minerals	6.00
Water	2.75
Free acidity (lactic acid)	4.25
	100.00

This powdered milk product gives 147.3 calories to the ounce, or 46.8 to the tablespoonful of powder. It is reliquefied by mixing in the proportion of one packed level tablespoonful of powder to two ounces of water. The resulting fluid yields 18.5 calories to the ounce, has a hydrogen ion concentration of *p*H 4.6, and a total acidity of 0.6%.

Although these powdered milk products have had their greatest vogue in infant and child feeding, they are being used more and more for therapeutic and normal diets of adults. Having demonstrated their value not only for normal infant feeding and for concentrated diets of older children, but in cases of diarrhea and other gastro-intestinal upsets, and in allergy to fluid milk, these dried milks are now extensively employed in peptic ulcer and many other conditions in adults where a bland, easily digestible, high calory diet is required.

A palatable combination which may be employed to vary the monotony of the continuous milk diet is that achieved by mixing plain or chocolate flavor malted milk with the powdered milk preparations. The malted milk may be added either to the powder before reliquefaction, which is the simplest method, or it can be stirred in the reliquefied milk. Malted milk is a processed mixture of whole milk, barley malt, and whole wheat, which has been evaporated to dryness. It is partially pre-digested, and consequently renders milk even more digestible, as well as imparting flavor and added nourishment to it. Although any desired quantity may be used, three tablespoonsful of malted milk to a quart of fluid milk makes a suitable beverage. Malted milk has 123 calories to the ounce, or 82 to the tablespoonful of powder.[6]

According to mortality statistics, the death rate from gastric and duodenal ulcers has been steadily rising in this country. Whatever the cause of peptic ulcer may be, whether it is an infection, a trauma, a disturbance of metabolism, or due to hereditary factors, early diagnosis and prompt methods of treatment, either medical or surgical as indicated, are essential. In most cases, prolonged medical measures based on the skilful employment of diet will give relief. Pure milk must be the foundation of this dietetic treatment, with increasing reliance on the more digestible and more easily assimilated powdered and concentrated forms of this important food.

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Postoperative Vicarious Chronic Menorrhagia Cured by X-Ray

(*Concluded from page 354*)

to action on the tumors or ovaries or both. Some authorities advocate the rays because they do away with the need of surgical intervention while others, realizing that ten per cent or so of fibroids are or will become malignant, believe that the rays only give malignant growths a chance to gain headway and perhaps stimulate them by the mild dose. Runge personally seems to be against use of the rays in menorrhagia of any kind for reasons given above. He does not even allude in his book to vicarious menstruation or menorrhagia.

The following comment on Runge's position of doubt is in order.

The fear that X-rays may cause malignant growths to extend is surely an echo of the past when very soft tubes and small doses were inadequate. It is a well established fact that small doses of these rays are stimulant. In modern adequate doses associated with surgery in properly selected cases this fear is not well grounded.

Conclusions

1. The duration of this case with maintenance of health during 12 years is unique. One would expect at least neurasthenia.

2. The recovery power of the patient exemplified by five operations was a good foundation for success of any treatment.

3. A laparotomy on this patient at the present time could not be justified without modern nonoperative measures previously.

4. The time cannot be far distant when the public will demand reasonable trial of nonoperative physical measures before surgery is resorted to.

5. Physical therapy resembles all other measures in not being a cure-all. Neither is it a cure-nothing. The difficulty, which experience will remove, is to distinguish the operative from the nonoperative cases. Many borderline cases, like this one, belong in the physical therapeutic group.

6. There is no doubt in my mind but that operators, including myself, must learn this distinction and thus save patients the dangers and occasionally indifferent if not disabling results of surgery.

7. Hospital statistics show that about 80 per cent of all operations are classed as operations of "election," not of "emergency." In this case operation 1, 2 and 3, while elective, were necessary. Operations 4 and 5 were emergencies.

8. The present condition of this patient was that of election again, which permits nonoperative physical measures to reach their limit of relief or register their failure before another laparotomy is undertaken.

About February 15th, 1931, over the telephone the patient reported perfect health since cessation of treatment June 3rd, 1929—about 21 months previously.

45 West 9th Street.

Pellagra and Its Treatment*

With Report of 22 Cases

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PELLAGRA has been known to medicine for many years. Sutton[1] states that the disease has been recognized for two centuries. Its endemic home was Italy and Roumania. Its appearance in this country dates back to about 1907, when the increase of cases led the late Osler to Italy to study the disease.

Pellagra occurs most frequently in the areas south of the Potomac and the Ohio Rivers, wherein it is one of the foremost causes of death. This point is best illustrated by Wood[2] who gives the death rates of pellagra within the state of North Carolina as follows: in 1922—302 deaths; in 1923—224 deaths; in 1924—272 deaths; in 1925—398 deaths; in 1926—458 deaths.

Cooper[3] in his article entitled, "Pellagra Eradicated From Its Endemic Home In Italy And Roumania, Made Its Endemic Home In North Carolina," reports that from January 1, 1930, to August 23, 1930, there were officially reported to the North Carolina Board of Health, 3,140 cases of pellagra. From January 1, to July 30, a period of seventh months, 607 deaths were reported. For the corresponding period, 1929, 557 deaths were reported. For the entire year, 1928, 847 citizens of North Carolina died from pellagra, a mortality more than 4½ times that from typhoid fever during the same period.

Numerous papers have been written both here and abroad on the subject of pellagra. The most lucid and thorough study of pellagra was made by the late Goldberger[4] and his co-workers of the United States Public Health Service as reported in the various reprints of the United States Public Health Service, especially the reprint No. 1174, "Pellagra, Its Nature and Prevention." In it he stated that, although the fully developed disease makes a picture which, when once seen, can hardly ever fail to be recognized even by one who is not a physician, the diagnosis is by no means always easy, because the fully developed cases form only a small proportion of the total.

Andrews[5] defines pellagra (Erythema Endemicum, Lombardian Leprosy) as a deficiency disease of a chronic wasting nature which affects the alimentary tract, the nervous system and the skin, where the eruption is probably due to the action of light. The deficiency is a vitamin which has been designated by the symbol "P-P" (pellagra preventive).

The etiology of pellagra is at present, as it has always been, a subject of some controversy among the profession. Some believe that it is a germ infection. Experimental tests and careful observations show that pellagra is not a communicable disease. No germ that can properly be considered its cause has ever been found. Attempts to give persons pellagra by inoculations of blood or saliva or of other body discharges from severe cases have failed completely. On the other hand, when eleven convicts were fed on an unbalanced diet composed mainly of biscuit, corn bread, grits, rice, gravy and syrup with only a moderate amount of vegetables and no milk, meat or fruits, at least six developed the disease.

Others, Jobling and Arnold[6], consider that it is an intestinal intoxication. The majority of the medical profession, however, hold the same view with the late Goldberger of the United States Public Health Service, the Lordon School of Tropical Medicine and other scientific groups, that it is caused by a deficiency diet. Wilson[7] analyzes the statistics of Cluver[8] which deal with an outbreak of pellagra in the Durban Prison Command, where it was definitely established that if the protein in the daily diet fell below 40 gm. the prisoners developed pellagra.

It was observed by Goldberger[4] that in an ansylum where many of the inmates developed pellagra year after year, the nurses and helpers who lived with them never developed the disease. The only reason that has been discovered for this exemption was that the nurses and helpers were on a better diet with a liberal allowance of lean meat, milk, butter, cheese, fresh vegetables and fruits of which the inmates had very little or none. When this was corrected and the inmates received the same diet as the nurses and helpers, the condition of pellagra ceased. Similar experiences were observed in three orphanages and in several communities.

Wood[9] reports that a very wealthy old lady, who insisted on eating only biscuits and sweetened coffee, contracted a fatal case of pellagra after one year of this diet. He also has seen many cases of pellagra in aged people who, living alone, are unstimulated by a good appetite and eat the foods requiring little preparation, as, canned foods. He also reports many cases who dieted themselves into conditions of pellagra. The chronic insane who absolutely refuse food develop pellagra.

Davidsohn[10] reports a case of pellagra in a man of 78, who suffered from a cancer of the esophagus for many months. The esophagus was strictured and the patient took very little food, losing about 80 pounds within a few months. He developed the characteristic pellagrous eruption and a psychosis a few weeks before his death. His diarrhea was very slight because he took so little food. He died from a rupture of the esophagus into the pericardial sac, with a resulting purulent pericarditis. The interesting feature of this case is the fact that the nutritional deficiency resulted from a mechanical inability to take food.

Klauder and Winkelman[11] in reporting a study of 100 patients at the Philadelphia General Hospital, showed that chronic alcoholism is an important etiologic or at least a predisposing factor. One, however, fails to see this as causative of the disease. It matters little whether the disease occurs as the result of (1) deliberate neglect of a proper diet, as in the case of a patient who neglects food because of the influence of alcohol; or (2) because of an erratic appetite, whereby a patient nibbles foods whimsically and irregularly instead of eating properly; or (3) because of the deficient diet of poverty. The outcome is one and the same.

The disease has been produced artificially in healthy men, women and children by the simple process of eliminating certain foods from the diet for a lengthy period. The question of quantity is of the utmost importance. It is not enough merely to nibble; one must consume a substantial amount of milk and meat or other preventive food to supply fully the body's needs. The essen-

* Read before *The Northern Medical Association*, Philadelphia, December 15, 1930.

tials to remember in pellagra are the "Three M's" in its causation, namely, meal, meat (salt pork) and molasses.

The cases here reported were patients at the Philadelphia General Hospital in the services of Dr. Maurice Brown. Symptoms would appear sometimes as early as March, attain their peak in June, show an abrupt drop in July and terminate about August or September. The most conspicuous symptom was the eruption. It is the most characteristic telltale of the disease and the main reliance in its recognition. When the eruption first shows itself it may look very much like, and frequently is mistaken for, a sunburn. The sunburned appearance soon changes either to a dirty brown or a parchment-like appearance, then quickly becomes rough and scaly, or cracks and peels. Among the most distinctive peculiarities of the eruption is its affinity for certain parts of the body's surface. The backs of the hands, forearms and the backs of the feet are its favorite sites. Other parts are infrequently attacked. Another marked peculiarity is its tendency to cover similar areas on both sides of the body at about the same time (symmetry), sharply marginated and sometimes known as gloved dermatitis. Among other symptoms observed were diarrhea, weakness, burning pain in the stomach, mouth, throat, hands and feet, sore mouth, vomiting, nervousness, dementia, dizziness, loss of weight and a jumping sensation in the legs.

Knowles[12] has said that the "Three D's," dermatitis, diarrhea and dementia are usually necessary for diagnosis.

There are three important manifestations of the disease, clinically speaking: 1st, those presenting dermatologic symptoms; 2nd, those presenting gastro-intestinal symptoms; and 3rd, those presenting nervous and mental symptoms.

Cases

Case 1. Group 2.—P. M., white, aged 56, laborer, born in Ireland, was admitted to the hospital on June 3, 1929. He presented the following symptoms: soreness and redness on the back of his hands, and diarrhea. He had been on a debauch for four months prior to admission and lived entirely, when sober, on fried eggs, potatoes, white bread and coffee. The examination revealed a brownish-red, sharply marginated eruption on the back of both hands with considerable scaling. His tongue was dry and red with some coating. The treatment consisted of a diet largely composed of milk, meat, green vegetables and eggs. Medically there were prescribed brewer's yeast (2 teaspoonfuls in a cup of tomato juice three times a day) and dilute HCl. m x, 3 times a day. The diarrhea proved to be the most annoying symptom, but it was controlled the first week the patient was in the hospital. The patient was discharged on July 10, 1929, markedly improved.

Case 2. Group 1.—E. L., white, aged 52, born in Philadelphia, was admitted to the hospital on July 3, 1929, with a sharply marginated, deep discoloration on the dorsa of both hands, with bleeding erosions. This patient had had a similar condition during the summer of 1928. The same treatment as in Case 1 was extended to this patient. He was discharged on March 1, 1929, with his condition improved.

Case 3. Group 3.—C. A., colored, aged 44, born in North Carolina, was admitted to the hospital on July 10, 1929, with severe weakness, diarrhea, pellagra dermatitis and dementia. The eruption presented numerous vesicles and desquamations. Because of his nervous symptoms, he was transferred to the neurological department where he died on July 18, 1929, a few days after admission, and before proper treatment could be administered.

Case 4. Group 2.—G. K., white, aged 60, born in Philadelphia, was admitted to the hospital on June 6, 1929, with diarrhea, vomiting and discoloration on the back of both hands. The skin was very tender, sloughing in places. This was his third attack. In addition to his pellagra, he was suffering from myocarditis and, in spite of the treatment, he died on August 17, 1929.

Case 5. Group 2.—F. M., white, aged 42, born in North Carolina, was admitted to the hospital on August 20, 1929, with diarrhea, having from 12 to 15 stools daily, tinged with blood, weakness, loss of weight and a dark red eruption on the back of his hands which showed numerous sores. The patient also had colitis and emphysema. He improved under the usual pellagra treatment and left the hospital on September 15, 1929, with the condition improved.

Case 6. Group 1.—P. C., white, aged 46, born in Ireland, huckster, was admitted to the hospital on July 12, 1929, with a bright erythema of the neck extending to the sternum; it looked like a painted wedge, the apex of which was beginning to scale. There existed also a pellagra dermatitis of both hands. The patient had pulmonary tuberculosis. He improved under the usual treatment and was discharged on August 29, 1929.

Case 7. Group 2.—C. McC., white, aged 52, born in Massachusetts, a rivet maker, was admitted to the hospital on August 4, 1929, with the following symptoms: diarrhea, pellagra dermatitis of both hands and loss of appetite. At the end of August, at the termination of our service, he was markedly improved under the usual treatment.

Case 8. Group 3.—W. S., white, aged 52, born in Philadelphia, was admitted to the hospital on July 18, 1929. The dorsa of his hands were red and swollen with blisters. He had sores in his mouth, and a severe gastro-enteritis, causing diarrhea and preventing him from taking and retaining sufficient fluids and nourishment. His tongue was red, he had had insomnia for past month and severe abdominal pains. He had blisters on scrotum. This patient, previous to his admission to the hospital, would consume about a quart of liquor a day, practically without food. He had tachycardia, was irrational, and subsequently developed edema and died on August 5, 1929.

Case 9. Group 3.—R. M., white, aged 74, was admitted to the hospital on July 28, 1929, with very grave symptoms of pellagra; he had been at the hospital on two previous occasions with the same ailment. The mental symptoms were marked. He was an old alcoholic. In addition to his pellagra he had myocarditis and died August 1, 1929.

Case 10. Group 3.—T. J. C., white, aged 41, born in Philadelphia, was admitted to the hospital on July 30, 1930, with a brownish, symmetrical eruption on the dorsa of both hands, the latter being swollen and desquamating. He had had diarrhea for the past four weeks, pain in the lower abdomen and groins, and numerous sores on his mouth and tongue. Prior to his admission to the hospital, the patient had consumed a quart of "bootleg whiskey" per day and had gone for days without food. The examination revealed an emaciated, pale, white adult, a mouth containing numerous ulcerations, tongue very red, and a typical eruption on both hands. Patient had tachycardia and chronic myocarditis. He was irrational and at times stuporous. His temperature varied from 96.4° to 101.2°, pulse 74 to 138, respirations 22 to 34. The blood count was normal.

(Concluded on page 373)

Contemporary Progress

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Medicine

Serum Treatment of Pneumonia

G. H. Bigelow (*New England Journal of Medicine*, 205:242, July 30, 1931) reports results in 152 cases of pneumonia treated by a concentrated antipneumococcic serum prepared by the Massachusetts State Antitoxin and Vaccine Laboratory. Of these 86 cases were of type I and 14 cases were of type II, the remainder being of types III or IV, or untyped. The mortality in the 86 type I cases was 20.9 per cent., as compared with 31.4 per cent. reported by Finland for type I cases in Massachusetts not treated with serum; the mortality for the type II cases was 21.4 per cent., as compared with 34.4 per cent. reported by Finland for untreated type II cases. A study of individual case records showed in many cases, especially of type I, a definite therapeutic effect of the serum and a shortening of the duration of the disease. In other types of pneumococcus infection the serum is without effect. The following dosage is recommended by the Massachusetts health authorities for cases of type I and type II pneumonia treated with this serum. If the patient is not hypersensitive to horse serum, as determined by the history and the ophthalmic test, an initial dose of 5 c.c. of the serum should be given intravenously; the serum should be warmed and injected at a rate not faster than 1 c.c. per minute. If no reaction occurs within two hours, 25 c.c. of serum is given in the same way; if no reaction occurs within the next two hours, 45 c.c. is given. This is sufficient for the average case if treatment is begun within the first three days; the need for further serum treatment must be determined in each case by the attending physician. Serum should be given as early as possible; if the infection is found to be due to some other pneumococcus type than I or II, serum treatment should be discontinued.

R. R. Armstrong and R. S. Johnson (*British Medical Journal*, 1:931, May 30, 1931) report 26 cases of type I and II lobar pneumonia treated with concentrated antipneumococcic serum in various London hospitals. The authors found no essential difference in the response of type I and type II to serum therapy. Of the 26 cases of both types, the disease was aborted in all of 6 cases given serum on the second day of the disease, and in 3 of 8 cases given serum on the third day; only 4 of the 26 cases showed no favorable effect. The toxic phenomena, cyanosis, delirium, etc., were most rapidly relieved by serum. The usual initial dose was 20 c.c. given intravenously; if the serum is given in the first three days of the disease a second dose of 20 c.c. and a third of 10 c.c. are usually sufficient; in later cases three doses of 20 c.c. are given and one dose of 10 c.c.. Injections are usually given at eight to ten hour intervals.

Rheumatoid Arthritis

R. L. Cecil (*Annals of Internal Medicine*, 5:23, July, 1931) as he has previously reported has found a streptococcus in either the blood or the joint cultures in 77 per cent. of cases of rheumatoid arthritis in which these cultures have been made at the Cornell University Arthritis Clinic. In other types of arthritis cultures of both blood and joints were sterile. The organisms isolated in rheumatoid arthritis were found to be atypical hemolytic streptococci. The blood of rheumatoid patients show specific streptococcal agglutinins in titers of 1:320 to 1:5120 or even higher. Agglutination tests have proved of definite value in the diagnosis of early cases or of mixed forms of arthritis, in which the clinical picture was not fully developed or was atypical. As a result of these bacteriological and serological findings in rheumatoid arthritis, vaccine therapy with a streptococcus vaccine prepared from the "typical strain" has been employed at the Clinic in the last three years. In the preparation of this vaccine the streptococci are killed by formalin. The vaccine is given by both subcutaneous and intravenous injections, in doses of from 10,000,000 to 1,000,000,000 organisms with the former and 100,000 to 1,000,000 with the latter. Injections are given every four to five days as a rule, occasionally once a week. The dosage is so regulated as to avoid severe and unpleasant reactions. The results are grouped roughly as follows: Complete recovery from all joint symptoms; this occurs chiefly in the mild forms, but also in the moderately severe cases. Considerable improvement, but not complete recovery, reaching a stationary stage; this occurs chiefly in cases with well-marked joint symptoms of several years' duration. Little or no improvement, usually observed in the most advanced cases. There are, however, exceptions in all these groups, as some early cases may not respond to vaccine therapy, and some advanced cases may show an unexpected degree of improvement. In some of these cases, foci of infection have been removed, but in many no treatment other than the vaccine has been used.

G. F. Klugh (*Southern Medical Journal*, 24:706, August, 1931) reports that by using sufficient media to dilute the blood ten to twenty times, and growing cultures eight to ten weeks, he has been able to isolate a streptococcus in 58 of 74 cases of chronic infectious arthritis, or 75 per cent. In the more acute cases the streptococci have usually been isolated without so prolonged a growth of the culture, have produced more green pigment on blood media, and shown less pleomorphism than in the more chronic cases. Swollen cocci and diphtheroids isolated in some of the more chronic cases in association with typical streptococci are apparently involutional forms of the latter. Klugh has used autogenous vaccines prepared from blood cultures in the treatment of patients with arthritis, together with liberal diet and rest, and has found such vaccine therapy to be of definite benefit.

Diet and the Vegetative Nervous System

E. Keining and G. Hopf (*Münchener medizinische Wochenschrift*, 78:1174, July 10, 1931) have found that

in disturbances of the vegetative nervous system the addition of calcium to the diet is not always effective, and that much better results are obtained by the use of all three kations that are antagonistic in their action to sodium, *i.e.*, calcium, potassium and magnesium. At the same time the sodium, in the form of sodium chloride, is restricted. They have accordingly prepared a mineral salt mixture containing calcium, potassium and magnesium which they use in combination with restriction of sodium chloride of the diet in various disturbances of the vegetative nervous system, and especially in certain dermatoses such as pruritus, urticaria, acute eczema, etc. This mixture is given in doses of 1 gm. three times a day before meals. Isotonic solutions of a salt mixture can also be given intravenously or intramuscularly. By this method, the remineralization of the body is assured and the electrolyte action on the vegetative nervous system is enhanced. The symptoms of the dermatoses so treated subside rapidly.

Surgery

Avertin Anesthesia

G. Pfister (*Archiv für klinische Chirurgie*, 165:402, June 2, 1931) reports the use of avertin anesthesia in 215 cases, in most of which it was used as a base anesthetic in combination with ether. The avertin was given *per rectum* in doses of 0.08 to 0.1 gm. per kg. body weight, never exceeding a total dosage of 8 gm. for women and 10 gm. for men. The avertin usually produced sleep in five to twenty minutes, when ether was given by inhalation; if more than 100 gm. of ether was required for the completion of the operation the avertin anesthesia was regarded as having failed; this occurred in 68 cases, in 28 of which the dose of avertin did not exceed 0.08 gm. per kg. In 64 cases complete anesthesia was obtained by avertin alone. In another small series of 12 cases nitrous oxide inhalation anesthesia was used to supplement the avertin. In 4 cases or approximately 2 per cent. of the 215 cases with avertin or avertin-ether anesthesia, serious symptoms directly due to the avertin developed with cyanosis and falling pulse. A study of the alkali reserve in 50 cases under various types of anesthesia was made with results as follows: It was found that with avertin-ether and with avertin-nitrous-oxide, the fall in the alkali reserve was less than with avertin alone, but the return to normal was more rapid; the fall in the alkali reserve was less with avertin-ether than with ether alone and the return to normal somewhat more rapid. With avertin-nitrous-oxide, however, the drop in the alkali reserve was greater and the return to normal less rapid than with nitrous-oxide alone, and also than with avertin-ether. Pfister is of the opinion that avertin is not of great value as a base anesthesia; it does diminish the amount of ether necessary and facilitates the induction of anesthesia, especially in nervous patients; and has a somewhat favorable influence on the alkali reserve; yet it is not without danger, and in safe doses has not a prolonged action. He does not favor its routine use, but uses it in cases where the induction of anesthesia is particularly difficult, especially for operations around the oral cavity.

The Changing Picture of Appendicitis

R. M. Watkins (*Annals of Surgery*, 94:197, August, 1931) presents an analysis of symptoms and signs in 1,000 consecutive cases of appendicitis in adults (over thirteen years of age) operated at the Woman's Hospital of Cleveland, Ohio, in comparison with the symptoms of appendicitis as described by authoritative writers a decade or more ago. A detailed pathological study of the appendix was made in each case and the cases grouped according to the pathological findings as chronic, acute simple and acute suppurative types. These pathological types corresponded with the clinical picture of chronic, acute and suppurative appendicitis. There were 515 cases in the chronic group, 292 in the acute simple group, and 193 in the acute suppurative group. The typical major symptoms in appendicitis, varying somewhat in the different groups, were found to be: Pain in the abdomen, nausea and vomiting fairly constant; rigidity of the abdominal muscles most common in the acute forms; maximum tenderness about evenly distributed between the McBurney area and the right lower quadrant; increased pulse rate, fever and leucocytosis depending on the severity of the infection; normal bowel elimination in about a half of the patients; constipation in the minority (somewhat more frequent in the chronic than in the acute groups); diarrhea only occasionally; abdominal distension in a small percentage. As compared with the older descriptions of the clinical picture of appendicitis, the author finds that abdominal pain, nausea, vomiting, muscular rigidity, abdominal tenderness and elevation of pulse, temperature and leucocyte count occur "in the same proportions" as formerly; constipation, diarrhea and abdominal distension show a definitely lower incidence at present. The diagnosis of appendicitis, therefore, can be made with confidence in the presence of other cardinal symptoms and signs if bowel elimination is normal and there is no distension of the abdomen.

The Radio-Knife for Thyroidectomy

A. S. Jackson (*Annals of Surgery*, 93:1132, June, 1931) reports the use of the radio-knife in 160 thyroidectomies in 1930 at the Jackson Clinic, Madison, Wis. The radio-knife is not used for the skin incision, as the use of the scalpel for this purpose has been found to give a better scar, but for the removal of the gland tissue the radio-knife has definite advantages. It has proved of most value in resecting the thyroid in exophthalmic goiter; with it, the gland can be hollowed out preserving a thin lateral capsular wall and narrow posterior strip protecting the recurrent laryngeal nerves and the parathyroids—a procedure that is not possible with the scalpel without endangering these structures. Any remaining portions of the gland can be scooped out or destroyed by coagulation. The removal of so large an amount of gland tissue and the resulting fibrosis must certainly reduce the possibility of recurrence, for in the series of cases operated there has been no postoperative recurrence. The radio-knife is also the most satisfactory for operating accessible malignant growths of the thyroid. While the important blood-vessels must be ligated, it is possible to coagulate almost all vessels in the gland substance as well as other smaller vessels in the operative field, so that the amount of catgut used is much reduced; the operative field is much drier and the time of operation is shortened. Convalescence is, in general, smoother, but the author has not found that in severe cases of hyperthyroidism the tendency to a postoperative reaction is definitely reduced by the use of the radio-knife. The advantages of the use of the radio-knife for thyroidectomy have so far outweighed the disadvantages that the author has adopted it for routine use in his thyroid operations.

Postoperative Pulmonary Atelectasis

A. L. Brown (*Archives of Surgery, 22:976*, June, 1931) notes that "the importance of pulmonary atelectasis as a postoperative complication has gained increasing recognition during the past few years." His own experi-

mental and clinical studies have shown that the bronchial secretions play an important rôle in producing pulmonary atelectasis and also in determining the type. A study of the different types of bronchial secretions in cases of postoperative pulmonary atelectasis by means of the bronchoscope has shown that usually the secretion is thick and viscid and plugs one of the larger bronchi, atelectasis occurring distal to the plug. If the secretion is thinner, it is more widely dispersed with blocking of the smaller bronchi and bronchioles resulting in a scattered lobular atelectasis. If it is "almost watery" not only bronchial plugging, but bronchial filling may occur producing the condition known as "drowned lung." The author has found that postoperative pulmonary atelectasis tends to occur more frequently with spinal than with inhalation anesthesia. The factors in spinal anesthesia that predispose to this complication are: Inhibition of the depth and force of the respiratory movements during operation and for some time thereafter; increase of the viscosity of the secretions; and the fact that the patient remains relatively quiet for several hours after spinal anesthesia. All these factors increase the possibility of obstruction of the bronchi by viscid secretions with resulting atelectasis.

Partial Cholecystectomy

W. L. Estes, Jr., (*Archives of Surgery*, 23:119, July, 1931) describes an operation for partial cholecystectomy which he has used in a limited number of cases in which cholecystectomy was technically impossible or unsafe. This indication occurs most frequently in cases of acute cholecystitis with an impacted stone in the cystic duct. The first case in which this technique was employed was a gangrenous cholecystitis with inflammatory induration about the cystic duct. The operation consists in splitting the gall-bladder from the fundus to the cystic duct and trimming away the redundant part of each half down to the border of the liver; bleeding from the cut edges is controlled by ligature or lock stitch up each side; cigaret drains are placed close about the cystic duct and brought out against the remnant of the gall-bladder. The number of cases in which such an operation is indicated are relatively few. The author has used it in 7 cases since 1923; operative recovery was good in all; only one has shown any symptoms of recurrence of disease of the biliary tract, relieved by Lyon biliary drainage. Different methods of partial cholecystectomy have been reported by other surgeons, including W. J. Mayo, on similar indications. The operation should never be employed when a cholecystectomy can be safely done.

Urology

Radical Operation for Cancer of the Penis

H. H. Young (*Journal of Urology*, 26:285, August, 1931) describes his technique for the radical operation for cancer of the penis as at present used. This operation, although employed in 1907, was not described until 1926; and has since been modified. The purpose of the operation is to remove the tumor and the entire lymphatic drainage from the penile carcinoma to the upper limits of the groin on each side and yet conserve the root of the penis to permit satisfactory micturition and even sexual intercourse. The latest modification of the technique insures the complete removal of the dorsal lymphatics, thus making the operation even more radical than before, yet without total emasculation. Total emasculation, the author is convinced, is unnecessary in cancer of the penis because the lymphatic drainage is almost entirely into the glands of the groin and practically never into the scrotal or perineal regions.

In the same journal (*Journal of Urology*, 26:295, August, 1931) L. G. Lewis reports the results obtained at Johns Hopkins' Hospital with this radical operation for cancer of the penis. In fifteen years there have been 70 cases of cancer of the penis diagnosed at the Brady Urological Institute of Johns Hopkins; and in 34 of these the radical operation has been done by Young's method. Of these 34 cases 25 showed enlargement of the inguinal or femoral glands, and in 13 of these one or more glands were definitely carcinomatous. The average duration of symptoms was twenty-six months. Pathological examination was made in all but one case, and showed squamous cell epithelioid carcinoma, with the transitional stage of basal cell involvement in every instance. Of the 34 patients operated, 3 died postoperatively and 31 left the hospital with the wound healed and voiding freely through the newly formed meatus in the penile stump. Fifteen of these 31 patients are living, 8 have not been traced and 8 have died. Of the living patients, all are free from recurrence, 6 of them for five years or more since operation; 6 report satisfactory sexual intercourse since operation. Of the 8 patients that could not be traced, one was known to be living and well three years after the operation. Of the 8 patients that died, 3 died with metastases, but none with local recurrence of the carcinoma. Of 10 patients who came to operation within one year after noting the initial lesion and showed no carcinomatous involvement of the glands, 8 are living and well and 2 have not been traced. In the follow-up study, no instance of recurrence of the growth in the penile stump or postoperative extension to the scrotum or its contents has been found. This operation, the author concludes, affords the best chance for a radical cure without incapacitating the patient in any way.

COMMENT

A well balanced, carefully applied anteoperative and postoperative course of X-ray treatment might very easily and positively decrease the number of recurrences and metastases. It is my belief and experience that no carcinomatous lesion should be handled or surgically invaded before the X-ray has been applied.—V. C. P.

Neurosurgery in Diseases of the Urinary Bladder

J. L. Learmonth of the Mayo Clinic (*Journal of Urology*, 25:531; 26: 13; 229, June, July and August, 1931) discusses the anatomy of the presacral nerve and the hypogastric ganglion and describes the technique used by himself for section of the presacral nerve (sympathectomy) and for subtotal denervation of the bladder. In 3 cases the author has considered a section of the vesical branches of the hypogastric ganglia to be justified for the relief of severe pain in operable carcinoma (2 cases) or for persistent tuberculous cystitis after nephrectomy (one case). This operation is indicated in only a few cases and chiefly at the request of the patient, as it is followed by retention and necessitates regular catheterization for the remainder of the patient's life. In cases of constant bladder pain with the vesical spasm and frequency of urination due to panmural fibrosis (Hunter's ulcer), or following cystitis, without visible lesion of the bladder, section of the presacral nerve may be done with very satisfactory results. This operation may be combined with division of the sympathetic chain at the level of the sacral promontory; it does not interfere with urinary function, but in males is followed by loss of the power of ejaculation. This procedure acts by interrupting a certain number of afferent pain fibers from the bladder and by increasing the local blood supply. The author reports 4 cases of panmural fibrosis and one case of persistent tuberculous cystitis operated by this method, in all of which very definite, although not complete relief from

pain and frequency was obtained. In 2 other cases resection of the presacral nerve was done to relieve vesical paralysis resulting from disease of the spinal cord. In such cases the operation is indicated only if there is no total paralysis of the pelvic nerves, if the patient is continent by action of the external sphincter, and if renal function is satisfactory. In cases of this type where micturition is improved by the operation, the author explains the effect of the operation as follows: The undiminished action of the inhibitory impulses transmitted by the intact sympathetic nerves overbalances the few motor impulses transmitted by the injured parasympathetic nerves; this nervous imbalance is corrected by the sympathectomy.

Acidosis and Urea Concentration

C. J. Finck (*Urologic and Cutaneous Revivw,* 35:446, July, 1931) in his study of nephritis has found that there may be cases with a considerable degree of nitrogen retention but with slight acidosis, and in such cases the symptoms are much less severe than in cases with less nitrogen retention but more marked acidosis. He has found that the acidosis of nephritis is due to inability of the kidney to excrete the acid ions; one of the chief acids the retention of which causes acidosis of this type is phosphoric acid. The rational treatment for the acidosis of nephritis is the limitation of the acid intake and also of the foods containing phosphates. It has been found also that certain calcium salts aid the intestinal elimination of phosphates, and are therefore of value in the treatment of nephritic acidosis. The author has treated cases of nephritis with a diet permitting meat once a day, but not meats rich in neucleins, fruit, green vegetables and cottage cheese; combined with the administration of calcium salts. He has found that this treatment increases the alkaline reserve; and that with the relief of acidosis the nitrogen retention is also diminished. This would indicate that acidosis contributes to nitrogen retention and both are favorably influenced by the treatment designed to combat the acidosis primarily.

Chloride Deficiency in Anuria

C. van Caulaert and P. S. Pétrequin (*Archives des maladies des reins,* 6:52, June, 1931) conclude from experimental studies on dogs and clinical studies on anuria of different types in man, that a sudden arrest of renal secretion and excretion (anuria) is always accompanied by a diminution of the blood chlorides. They find this to be true whether the anuria is due to obstruction or to failure of renal secretion, as in nephritis. This chloride deficiency manifests two phases: 1. In the early stages when symptoms are relatively slight, the diminution of chloride in the blood is accompanied by a fixation of chloride in the tissues. 2. In the later stages, when vomiting and diarrhea have developed, there is an absolute loss of chlorides with chloride deficiency in both the blood and the tissues. Such chloride deficiency manifesting these two stages, these authors have found to be an absolutely constant phenomenon in anuria. The chloride deficiency in the second phase may cause such a high degree of nitrogen retention as to be fatal even after the anuria is relieved. From their findings the authors conclude that the administration of sodium chloride is not indicated in the early phase of anuria and chloride deficiency, but is indicated in the second phase after the onset of vomiting and diarrhea when there is a chloride deficiency in both blood and tissues.

Diuretic Action of Sulphur Mineral Waters

J. Goldberger of Carlsbad (*Zeitschrift für Urologie,* 25:512, July, 1931) reports a study of the effect of the Carlsbad waters in producing diuresis. He comes to the conclusion that hypotonic mineral waters containing sulphur have a prolonged progressively increasing diuretic action, which is due chiefly to the SO_4 content. This diuretic action is of special value in cases of lithiasis as well as of urinary infection, and favors the elimination of the end-products of nitrogen metabolism. The use of mineral waters of the Carlsbad type is indicated in acute and chronic cystitis, pyelitis and pyelonephritis; in renal lithiasis of all types; in all forms of prostatic hypertrophy and prostatitis, even those with marked urinary retention and renal insufficiency; in chronic nephritis with nitrogen retention but without edema. It is contraindicated in acute nephritis, nephrosis and in all types of chronic nephritis or nephrosis with a tendency to edema.

Ascending Urinary Infection

W. J. Carson (*Archives of Surgery,* 23:74, July, 1931) reports experiments on rabbits in which cultures of *Staphylococcus aureus* and *Bacillus coli* were injected into the ureteral wall just proximal to the bladder or into the fundus of the bladder. The animals were killed two to forty-six days after this procedure, and the ureters and kidneys studied histologically. It was found that there was an inflammatory infiltration following the perivascular lymphatics of the ureter into the renal pelvis; in some instances the kidneys showed a perivascular infiltration of lymphocytes. In some instances also the organisms injected were observed in the submucosa of the ureter. Thus the author concludes that infection produced experimentally at the lower end of the ureter or in the bladder wall has been demonstrated to pass upward to the kidneys by way of the perivascular lymphatics.

Pediatrics

The Common Cold in Children

W. R. Sisson (*New England Journal of Medicine,* 205:186, July 23, 1931) notes that the common colds are rare in early infancy, and their incidence increases with age until the school age, when it apparently reaches its peak. Recent studies of the common cold have indicated that it is primarily due to infection and that most probably it is caused by a specific organism, "possibly a submicroscopic virus." Certain other factors are contributory causes—temperature, dietary deficiencies and exposure. The common cold in itself is a relatively innocent disease in children as in adults, but in children especially its sequelae are often serious and sometimes fatal. It has been found that soon after the onset of a cold, the normal nasal pharyngeal flora changes, pathogenic organisms, hemolytic streptococci, pneumococci, etc., becoming numerous. Pharyngitis, tonsillitis, otitis media, adenitis, mastoiditis and sinusitis are frequent sequelae of the common cold in children; and a careful clinical history not infrequently shows that a cold has immediately preceded the onset of such conditions as pyelitis, bronchitis, pneumonia and appendicitis. If the common cold is due to a specific virus, it is probable that the virus, like that of measles, renders the host more susceptible to other infections. In infants especially it has recently been recognized that disturbances of nutrition also result from common colds. There is no established treatment for the common cold; every physician "has his own theories and medical procedures." But the author regards isolation as one of the most effective and logical methods for controlling the common cold and reducing the incidence of its sequelae especially in infants and children.

Roentgenography in the Diagnosis of Congenital Syphilis

E. C. Vogt (*American Journal of Roentgenology*, 26: 96, July, 1931) reports a roentgenological study of the bone lesions in 109 children in whom the diagnosis of congenital syphilis was definitely established. All of the children were under two years of age and 104 of them under one year of age. The most common symptoms in these cases were: Failure to gain weight or loss of weight; rash or skin lesions; snuffles or cold in the head; paralysis or failure to use one or more of the extremities (pseudo-paralysis). On physical examination the most common findings were snuffles, skin lesions, enlarged liver and spleen, and generalized adenopathy. In the 104 children under one year of age, Wassermann tests were recorded and in 83, or 91.2 per cent., were definitely positive. Of this group of 104 children, 74, or 71.1 per cent., showed bone lesions characteristic of syphilis; 15, or 14.4 per cent., showed changes probably syphilitic, but occasionally due to other diseases; 6, or 5.7 per cent., showed changes suggestive of syphilis, but not diagnostic without other evidence. In the 5 children over one year of age, the long bones were negative in all; roentgenograms of the skull were obtained in 3 of these cases, and one showed irregular erosion and widening of the lambdoid and posterior portion of the sagittal sutures. The bone changes most characteristic of congenital syphilis are: 1. Bone production as sub-periosteal thickening found in 78 per cent. of cases under one year of age. 2. Osteomyelitis with bone absorption and usually new bone formation, found in 63 per cent. of cases; a special type of osteomyelitis—bilateral semilunar defects at the upper end of the tibia medially adjacent to or below the epiphyseal lines, is regarded by the author as pathognomic of syphilis and was found in 45 per cent. of the cases under one year of age. 3. Disturbance of growth showing a dense narrow line at the end of the epiphyses with a parallel zone of diminished density just proximal; if the metaphyseal margins are serrated, the findings are characteristic of syphilis. In 18 cases in which repeated roentgenographic examinations were made after antisyphilitic treatment was instituted, all showed progressive healing of the bone lesions.

Treatment of Celiac Disease

C. G. Kerley (*Archives of Pediatrics*, 48:326, May, 1931) is convinced that celiac disease is often due to cow's milk the fat content of which plays the principal toxic rôle; it is best treated by the complete withdrawal of cow's milk from the diet. The celiac infant must have fluids, protein and carbohydrates. In younger children he uses a calcium caseinate mixture, consisting of 30 to 40 ounces of water, calcium caseinate 2 ounces, starch 1 ounce and sugar 2 ounces; for older children who often refuse this mixture it may be flavored with chocolate, vanilla or other flavors. With this orange juice, stewed apple, over-ripe banana, dried whole wheat bread or zweiback are used according to the age of the child. Later minced rare beef, minced chicken, hard boiled egg yolk and vegetable purées are added. In case mucous colitis is troublesome, green vegetables are withheld for a few weeks. With this regimen, there is at first a loss of weight owing to the disappearance of the edema, but there is prompt improvement in the appetite and in the character of the stools; and ultimately a satisfactory gain in weight.

Lactic Acid and Milk

M. L. Saldun (*Archives de médecine des enfants*, 34:341, June, 1931) reports the use of lactic acid milk in infant feeding. The milk is skimmed to reduce its fat content and 6 to 8 drops of a 75 per cent. solution of lactic acid added per liter; as a rule 6 drops are added. Five per cent. sugar is added, but for children with severe diarrhea, half the sugar is replaced with dextro-malt or similar preparation. In lactic acid milk so prepared, the percentage of protein and of lactose is increased and the fat diminished by 30 per cent., in addition to the increased acidity. The chief indication for its use is nutritional disturbances with acute diarrhea. But this milk has also been used in premature infants and those with congenital debility; and in nutritional disturbances without diarrhea. Of 60 cases in which this type of lactic acid milk has been used, 46 responded favorably to the treatment and made a good recovery; the average daily gain in weight was 29 gm. Of the 14 children that failed to improve with the lactic acid milk, 11 died and 3 recovered under some other method of treatment.

Antirachitic Potency of Milk from Cows Fed Irradiated Yeast or Ergosterol

A. F. Hess and his associates (*Journal of the American Medical Association*, 97:370, Aug. 8, 1931) report results obtained in the prevention and cure of rickets by feeding infants with milk from cows given irradiated ergosterol (viosterol) or irradiated yeast in addition to the usual fodder. One hundred and two infants, one and a half to six months of age, were selected from those attending two Department of Health baby clinics in New York City. They were divided into four groups of about 25 infants each; two groups were given milk from cows fed viosterol (100,000 rat units and 200,000 rat units daily); and two groups were given milk from cows fed irradiated yeast (30,000 rat units and 60,000 rat units daily). No other antirachitic substance was given during the three winter months in which these feeding experiments were carried out. At the outset 13 infants were found to show roentgenological evidence of rickets and 36 some clinical evidence of rickets. Of the 13 infants with roentgenological rickets, all but 2 showed complete healing; these 2 had been given the weaker "yeast milk." Of the four milks all but this weaker (half-strength) yeast milk were found to prevent rickets; only 2 of the infants without evidence of rickets at the outset developed roentgenological evidence of rickets, both given the weaker yeast milk. A few on the other milks developed slight clinical evidence of rickets, but the authors point out that this occurs with all antirachitic agents. Many of the infants showed better calcification at the wrists than normal infants of the same age. The advantage of this method in clinical work is that the infant is given the antirachitic substance with the food, without any addition to the formula, and hence without dependence on the coöperation of the mother.

Viosterol and Cod-Liver Oil

M. G. Wilson and H. F. Swift (*American Journal of Diseases of Children*, 41:52, July, 1931) state that viosterol is being used in pediatric practice to some extent as a "substitute for cod-liver oil" in spite of the fact that cod-liver oil contains fat-soluble vitamin A as well as the antirachitic vitamin, and viosterol only the latter. Experiments on rats showed that animals fed on a purified diet adequate in proteins, inorganic salts, calories and vitamin B, showed in addition to rachitic changes, failure to grow normally, xerophthalmia, inflammatory changes in the upper respiratory tract, and gaseous distention of the intestines. If viosterol is added to this diet, calcification of the bones was increased, but the growth was not increased and xerophthalmia and the

(*Concluded on page 373*)

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NEW YORK, OCTOBER, 1931

The Baby Moratorium

The New York birth control propagandists have declared a moratorium on births. "No woman has the right to become pregnant in times like these."

When the world has reached a state of affairs which makes it possible for this organization to broadcast such a declaration, is it time, not for the purchase of contraceptives, but for a revolution?

What would these reactionary people advise if times were to get worse? Suicide?

The Academic Aristocracy

Dr. Walter M. Kotschnig of Geneva, general secretary of International Student Service, speaking recently at Mount Holyoke College before delegates from universities and student organizations of thirty-four countries, deplored the indifference of the American student to anything outside of campus activities, particularly in the field of international affairs and politics. Among other suggestions he proposed a seminar of a month in Russia on the situation there. Such foreign seminars would tend, he thought, to neutralize the work of "cheap patriotic societies . . . which are averse to anything smacking of international interest." Sentimental nationalism, indifference and ignorance should be persistently combated.

This is probably requiring entirely too much of the great body of our college youth. Most of them at the present time represent the rise in an industrialized and democratized country of a hitherto uncultured and traditionless group of dubious hereditary background. The campus adequately absorbs all the emotional, physical and intellectual energies of which they are capable, and such adaptation is altogether wholesome and prophylactic. Campus life makes for neuronic and behavioristic stabilization.

What do we mean by prophylactic?

We mean prophylactic from the mental hygiene standpoint. In the Philistine college milieu the ineradicable passions and prejudices of the students' social strata sleep innocuously and the gain that these boys and girls make in all reasonable respects is vast enough and most salutary. The general effect is to make the brain safe for sanity if not for progress.

The added intellectual and emotional strain which would be incident to an international program of the sort proposed would not be wise from the medical standpoint. Why intensify psychiatric problems? The student should have a good time in college. European sojourn should bring to such a body of youth only the ordinary educational, esthetic and recreational rewards that are to be gained without undue strain.

It will be fatuously said that it is to such youth that the future must look for enlightened leadership. But the answer to this is that the very few leaders who are needed and who will determine to-morrow's world policies will appear, even from such backward groups or from elsewhere. Policies are never determined in any other way. The student body does not have to be worried over in this connection. The aristocratic individuals are there who will transcend their environment. They were at Mount Holyoke when Dr. Kotschnig spoke and doubtless even reach Russia now and then.

Surgery as One of the Fine Arts

The fine arts are not supposed to connote the utilitarian. In the case of surgery the utilitarian phase tends to obscure the esthetic and sometimes the obscuration is complete. Yet it is upon the esthetic phase, which is a reality, that we wish to dwell for a moment. We insist that surgery should have a recognized place among the fine arts, every one of which has more or less of a utilitarian phase, dispite the fact that they stand primarily for art created for its own sake rather than for the sake of utility.

One entering an operating room and watching surgeons at work cannot fail, if one has the esthetic sense at all, to feel the atelier-like atmosphere and to see the surgeon as artist and his work as art. Otherwise the surgeon is seen only as a superartisan or high hat mechanic. Because the surgeon works with splints and other apparatus the superficial impression suggests the shop, the bench, the repair depot. One would not have such a misapprehension in the case of painters or etchers because they grind and mix paints, stretch canvases, and work with the paraphernalia of etching.

The modern operating room, from the esthetic standpoint, is a studio. More exacting technique, finesse, skill and planning go into thyroid surgery than into the painting of our ateliers.

If magic and beauty are the criteria, very well; there are the magical result of a successful gastroenterostomy and the beauty of anatomical reconstruction, whether it be of face or perineum. Illustrations galore will come to mind.

The art motif sometimes boils over and comes to the fore aggressively as when the Academy of Medicine stages an art exhibition by physicians. But that was al-

ways so. Skene was a sculptor of no mean skill.

Johns Hopkins boasts an art department which works in close collaboration with the surgical talent of the institution.

Physicians masterfully illustrating their own writings, as artists of a high order, like Dickinson and Beck, come to mind.

It is no libel to insist that there are surgeons whose orientation is primarily esthetic, utilitarian aims following after. Our own notion is that in such cases utilitarian results are superior, which no doubt will seem paradoxical to many.

What Fools These Mortals Be

One observes on sale in the shops everywhere small and inexpensive sets for the testing of beverages suspected of containing toxic substances. They are designed to give the purchaser "protection" at a small cost, with little trouble and without complicated apparatus.

The claim is made that they will detect wood alcohol, the many aldehydes, and acetone.

Herein is the naive assumption, so common among the people, that ethyl alcohol itself is an innocuous substance—that "good liquor" is a harmless beverage.

It seems to us that a civilized man would wish to be assured of the presence of any of the raw stuff that now goes into so-called beverages before drinking them.

Medical Analysis of a Thousand Marriages

Dickinson's recent study (*J. A. M. A.*, August 22, 1931) adumbrates a civilized approach to the sexual problems inherent in most unhappy marriages.

The institution of marriage itself suffers greatly because of a state of sexual affairs that is largely preventable or remediable, if only the medical profession will take its obligations in this field more seriously and not leave the job to quasi-charlatans.

Though only 4 per cent of the subjects studied came to the point of divorce or separation, nearly one-half showed some degree of difficulty in marital adjustment, one-sixth had considerable persistent distress in intercourse, eighteen wives were long-time married virgins, not from impotence but from ignorance, and about 2 per cent practiced continence.

The series was drawn from the socially normal and represented chiefly the educated urban couple, with the wife in good general health but needing the advice of an obstetrician or gynecologist.

The physical difficulty typical of the couples was that their common knowledge and the husband's technic were not adequate, even anatomic considerations receiving scant attention. The mental balk was in making sex fit the rest of life, or in straight facing of need of training in adaptation and expertness.

So marriage in the group of human beings typified by these "superior" persons was not sexually satisfactory in practically half the cases. In any five women, two reached orgasm, two did not, and one reached it "sometimes."

Counting the attitude toward coitus of patients reporting, it was positive (pleasurable, pleasant, agreeable) 49 times, and negative (dread, disgust, revulsion) 175 times.

The habitual duration of intromission was an instant in 12 per cent, under three minutes in 6 per cent, from 5 to ten minutes for 34 per cent, from fifteen to twenty for 17 per cent, and a half-hour or more for 9 per cent.

Frequency of coitus ranged from 16 per cent reporting "daily or oftener" to 11 per cent reporting "yearly or less." The average frequency was "twice a week."

The bride who seemed typical was in a state of sexual confusion.

The most hopeful aspect of this question lies in the fact that "The sexual difficulties revealed are not in the main organic in the woman and, save in exceptional cases, not functional. *They are variants of mental and emotional behavior.*"

The great need is for "the eventual making of useful schedules for sex education, for premarital medical instruction, and for texts on conjugal hygiene." Happiness in marriage depends too largely upon such aids to be left as it so often is now to mere luck. Lack of enlightened interest and erotic capability is by no means solely a feminine shortcoming.

We are, of course, in for another battle with those Victorian individuals and organizations which maliciously foster the confusion of sex with vice.

Our Fatigued Organizing Geniuses

Where is the genius who, using "American" methods, should now be organizing a Super-Pelman Institute for making mendicancy on the part of the unemployed millions an efficient, healthful, profitable, perhaps a leading, industry? What has happened to the go-getters who never before left any large field unexploited? What has become of the man who used to start lemonade stands on a chain-store scale with the lemons that were handed to others by fate? It is a strange asthenia that plagues these gentry. Is the old hocus-pocus played out for good? Are all the promoters at last abashed and scared to death by the fundamental demands of a sick world?

The Box of Pandora

The war situation is much the same as that of cancer. The civilized peoples of the world fear war as they fear cancer, yet they can not wholly master either. The Pact of Paris declared war a crime and yet we seem unable to disarm and cease spending billions madly in apparent preparation for war. Yet the determination to abate war would seem to be as sincere as the determination to abate cancer. War, in other words, *is* a social cancer, the cure of which is even less conceivable at present than the absolute cure of carcinoma.

"We all want disarmament. We all talk disarmament," says Senator Borah, just as we all want cancer to be finally mastered. We see clearly enough the relation of armament costs to the plight of the whole capitalistic system. We remember how unable the world was to stop the great war in 1916, when the Germans were ready to make peace and the Vatican and White House were urging peace; even with the original aims of the war reached the holocaust could not be terminated; in other words, we realize how dangerous it is to start a war.

There must be profound pathological reasons for war as for cancer. We can not shake them off. War absorbs labor and disposes of surplus populations; nevertheless, it is a pestilence for which we seem to have developed no adequate antibodies or compensations of beneficent and preventive character; through it we can dodge our real problems, as England in the great war was able to neglect the industrialization of Asia and the substitution of oil and electric power for coal.

Cancer, it is now established, is a group of diseases. War also is a group of diseases, with our statesmen in Class A.

How can political Pandoras of the type which loosed the sarcoma of prohibition (Class B) upon us and are

(Concluded on page 373)

The Importance of the Oyster

Physicians generally will be interested in the medical phase of the program at the recent convention of the National Shellfisheries Association and the Oyster Growers and Dealers Association of North America, Inc., at Sayville, Long Island.

A paper on the "Nutritive Value of Oysters" was given by Dr. R. E. Remington of the Food Research Commission of South Carolina. Much work has also been done in New York by Drs. Whipple and Wolf the past few years on the value of oysters in the treatment of the anemias, and their value has been shown to be equal to that of liver. One of the demonstrations shown at the convention was that of white rats used in feed experiments by Dr. O. M. Wolf.

An illustrated lecture by Dr. C. M. Yonge, of the Marine Biological Association Laboratory, of Plymouth, England, shed light on the reason for the special value of the oyster in anemia. The oyster has an elaborate system for taking food into its stomach where carbohydrate digestion takes place by means of enzymes, and of proteins and fats by large wandering phagocytic cells which are like the leucocytes of the human body. Absorption of food takes place in a series of microscopic tubes which extend out from the stomach and form the dark-colored organ which is popularly called the liver. The cells of this organ take up the smaller food particles and digest them in their own bodies, thereby performing a great part of the work of digestion. The "liver" of the oyster is therefore a glandular organ whose functions are similar to those of the glands of the human intestine and some of those of the liver.

Medical men know the association of copper with iron in the prevention and treatment of nutritional anemia. The oyster, too, has an intimate relation with copper and also manganese, and contains these metals in appreciable quantities and in a form which may readily be assimilated by the human body. Research workers have demonstrated that the value of oysters in anemia is equal to that of liver.

The American shellfish industry, especially that of oyster growing and marketing, has been placed on a high plane within the last decade, until now its sanitary and scientific aspects are equal to those of milk production and sale. Research workers have delved into the secrets of spawning and growth of oysters and other shellfish; their food and its digestion; and the manner of their natural purification. All this knowledge has been applied eagerly by the growers and dealers, until now the industry is conducted on a thoroughly scientific basis by all the larger growers. The purity and sanitary qualities of the shellfish products are maintained by governmental inspectors in the same manner that milk is continuously inspected. One may purchase oysters anywhere in the United States with the assurance that their sanitary quality is equal to that of milk.

The oyster growers are thoroughly alive to the value of the education of the public regarding the desirability of eating oysters, and they are planning to inform the public just as the dairymen are doing. The dairymen have had the advantage of propaganda of milk drinking put forth by boards of health, lay health organizations, and health periodicals until everybody appreciates the value of milk products. The oystermen may legitimately adopt the same methods of education, and, in fact, are planning to do so on a large scale.

One of the features of the Sayville Convention was a visit to the oyster houses of Long Island. The oystermen are fully aware of the value of sanitary surroundings, and they equip their new buildings with enameled handling tables and washers, and paint the walls a spotless white. The oysters, before being opened, are subjected to a conditioning process in pure water, and the finished product is packed in sanitary containers after the manner of milk. Among the latest methods is that of the quick freezing of the opened oysters, after the method successfully applied to fish and fruit. When this method comes into general use, oysters will be available the year around.

Antirachitic Milk

Cow's milk was rendered highly antirachitic by means of supplementing the fodder with irradiated ergosterol (viosterol) or with irradiated yeast.

These milks of various potencies were given to a large series of young infants during the winter. By this means rickets was prevented except in its minor manifestations; roentgenologic rickets did not develop. In cases in which rickets was already present, the milk brought about calcification within a month.

From the point of view of the number of antirachitic rat units fed to the cow, the irradiated yeast induced a more potent milk than the viosterol. This distinction was evident both by biologic assay on rats and by clinical tests of a preventive and curative nature.

The outstanding advantage of this method of antirachitic therapy is that it functions automatically; the specific factor is incorporated in the diet of the infant, relieving the physician of dependence on the cooperation of the mother.—A. F. Hess, M.D., *et al., J. A. M. A.*, Aug. 8, 1931

The Montague Hospital for Intestinal and Rectal Ailments

On the north side of Thirty-sixth Street near Lexington Avenue, in the City of New York, a pleasant, commodious and immaculate hospital has opened its doors to patients suffering from gastrointestinal, colonic and rectal disorders. It is a well built, seven story red brick structure with white trim, of simple colonial architecture, tastefully designed, and fireproof throughout. The attractive entrance, with its cylindrical white columns supporting a small balcony is an interesting and distinguishing feature, and bids a cordial welcome to those who knock for admittance.

The consulting office, examining rooms for the anoscopic and rectosigmoidoscopic examinations, and the *x*-ray department, completely equipped for the thorough examination of the stomach and entire intestinal tract, are situated on the ground floor. Here, too, is the Record Room from which are sent reports of these examinations to the family physician when requested, and also the laboratory reports of cultures, feces and tissues.

On the fifth floor are two large operating rooms, side by side, in the front of the building facing south.

The instrument cabinets are entirely of monel metal, and the sterilizing apparatus of the most modern type.

The hospital is also equipped with every approved modern facility for the treatment of non-surgical cases, such as diathermy, sinusoidal, Morse wave and other electrical apparatus, as well as quartz sun lamps of the Hanover type. In each toilet there is a Bidet fixture for the hydrotherapeutic methods of treating intestinal and rectal affections, which is referred to as a great convenience in anal hygiene. Colon irrigations are given only under medical supervision by specially trained technicians. No "courses" of irrigations are offered, only the number which competent medical observation finds necessary for the particular patient under treatment.

About 200 milligrams of the element radium for therapeutic use is at the disposal of the Montague Hospital. This method of treatment is employed in otherwise hopeless cases of cancer and in those cases refusing or not desiring surgical treatment.

Dr. Joseph Franklin Montague is the founder and medical director. He is a specialist in gastroenterolyogy and proctology. His monographs on the subjects of Pruritus Ani and Hemorrhoids are recognized as authoritative and his generous contributions to current medical literature have done much to interest and inform the medical profession of the observations and conclusions of one of its specialists in colonic and rectal ailments. Many instruments of Dr. Montague's invention are used both here and abroad, and serve to aid other specialists in this field. The following prominent physicians compose the consultant staff:

William Seaman Bainbridge, M.D., consultant in general surgery; Lawrence Henry Cotter, M.D., consultant in general medicine; Arthur Johnen, M.D., consultant in stomatology; John P. O'Flaherty, D.D.S., consultant in dental surgery; James J. King, M.D.; consultant in radiology; Ferdinand M. Jeffries, M.D., consultant in pathology; Archibald McNeil, M.D., consultant in bacteriology; Paul Esnard Bechet, M.D., consultant in dermatology; Alexander M. Foshee, M.D., consultant in anesthesia; Edward Julius Lorenze, Jr., M.D., consultant inpediatrics; and Carl C. Hugger, M.D., consultant in roentgenology.

The Care of the Hair

There is a common idea that much water injures the hair, though it is probably the soap used with the water which does the damage. Soap should be used upon the hair only at fairly infrequent intervals, but a good shampoo with super-fatted soap is of distinct advantage, especially when there is a disease of the scalp. Washing the hair frequently with warm water to which is added a teaspoonful of fluid extract of soap bark, or quillaja, does not injure the hair nor dry it and make it brittle. When so doing, do not rub the hair briskly, but dry gently. Dry hair does not resent the proper use of a soft clean brush.

Most hair pomades are rancid with the condition masked by perfumes; they are an abomination. Jamieson has devised an excellent pomade. It is made as follows:

Euresol	grn. xl
Sesame Oil	ʒvi
White petrolatum	ad ʒi

In place of lucerine use petrolatum. This pomade is not sticky or very greasy, conserves the color of the hair and markedly lessens dandruff.

The fine comb is used altogether too much. Women especially should use the broad comb with large and widely set teeth. A good one costs a dollar or more, but it does not break the hair and is useful in drying the hair after washing. The pomade may be best applied from the comb described. Needless to say, comb and brush should be kept very clean.

Literature, formulae and samples sent to physicians upon request to Bilhuber-Knoll Corp., 154 Ogden Ave., Jersey City.

MEDICAL BOOK NEWS

Edited by WILLIAM HENRY DONNELLY, M.D.

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OCTOBER

REVIEWS

Surgery: Its Principles and Practice

SURGERY ITS PRINCIPLES AND PRACTICE FOR STUDENTS AND PRACTITIONERS. By Ascley Paston Cooper Ashhurst, A.B., M.D. Fourth edition. Philadelphia, Lea & Febiger, 1931. 1189 pages, illustrated. 8vo. Cloth, $10.00.

This book is too firmly established with the Medical Profession to require an intimate description of its contents. For one who has used "The Prinicples and Practices of Surgery" by Professor Ashhurst for several years as a text for students of surgery it is a pleasure to welcome this new edition.

The arrangement and the style are above criticism. The fourth edition is completely revised. Over a score of subjects have been entirely rewritten to bring out the advances in surgery in the last two years.

From the completeness of our knowledge and experience with this text, we again recommend it with enthusiasm to the surgeon, the practitioner and the student. R. F. BARBER.

Hemorrhoids the Injection Treatment and Pruritus Ani

HEMORRHOIDS THE INJECTION TREATMENT AND PRURITUS ANI. By Lawrence Goldbacher, M.D. Second edition. Philadelphia, F. A. Davis Company, 1931. 207 pages, illustrated. 8vo. Cloth, $3.50.

This small book deserves a cordial reception on the part of those who wish to learn the treatment of hemorrhoids by the injection method from an expert. So many surgeons fail in the treatment of hemorrhoids to bring about satisfactory results by the various drugs used that a book which plainly describes a most logically balanced method is indispensable. It is a safe guide for the inexperienced when in doubt. MARTIN L. BODKIN.

Streptococcic Blood Stream Infections

STREPTOCOCCIC BLOOD STREAM INFECTIONS. By George E. Rockwell, M.A., M.D. New York. The Macmillan Company, 1931. 73 pages, illustrated. 8vo. Cloth, $1.75.

This little volume of 73 pages, presumably has extracted from the voluminous literature on streptococcus infections that which is important to the practicing physician. Special emphasis is placed on blood culture technique, and a practical conception of the classification of the streptococci. The work is divided into seven chapters including brief but comprehensive discussions of infection, resistance, the streptococci, the patient, the diagnosis, the blood culture, treatment and an appendix. Under treatment are described several cases of streptococcemia, some with meningitis which have received under the author's therapeutics, the values of mercurochrome, gentian voilet and sodium ricinoleate are decried. A good little treatise for the surgeon whose therapeutic resources become exhausted battling dread streptococcemia. MAX LEDERER.

Text-Book of Physical Therapy.

TEXT BOOK OF PHYSICAL THERAPY. By William Benham Snow, M.D. Volume I. New York, Scientific Authors' Publishing Company, 1931. 708 pages, illustrated. 8vo. Cloth, $10.00.

This volume, the first of a series to appear, forms a fitting memorial to the master who has so recently passed away. Dr. Snow was of the older school of physical therapy, and there is indeed much that he can teach to the newer followers. He was an ardent user of "electrotherapy" when the static machine, the faradic coil and the galvanic battery were the only modalities available. As the years went by newer machines were developed, and their use became linked with other physical measures, until the very term "electrotherapy" fell into disuse, and the term "physiotherapy" took its place. This gradually gave way to the term "physical therapy", which appears in the title of Dr. Snow's book.

Dr. Snow's clinical results, the results of the master operator, impressed all who knew him and saw his work. We cannot help but feel that the many case histories cited in his book are true and uncolored. The volume is divided into three main sections, devoted respectively to the direct or constant currents, high frequency currents, and electrosurgery. Each is an exhaustive exposition of its subject and is carried right up to the present developments as well as thoroughly covering the very oldest. No one who is interested in physical therapy should fail to read and study this excellent work. We look forward to the early appearance of the remaining volumes of the series.

JEROME WEISS.

Medical Psychology

MEDICAL PSYCHOLOGY. The Mental Factor in Disease. By William A. White. New York and Washington, Nervous and Mental Disease Publishing Company, 1931. 141 pages. 8vo. Boards, $3.00. (Nervous and Mental Disease Monograph Series No. 54.)

The book is intended to meet the needs of the rapid evolution of the mental factor in disease. It conceives the human being as a unit entity, reacting to situations in totality, both physically and psychically. It dispells the old notion of independence of the soma and psyche, and treats them as mere phases of the same entity. The Freudian mechanisms are well described, and the theory of the structure and function of the psyche, and its component parts, the id, the ego, and the superego, are well outlined and described. The book supplies the long felt need of correlating the more recent advances in the medical phase of psychology, especially in correlating the various psychoanalytic theories and principles. IRVING J. SANDS.

Clinical Diagnosis by Laboratory Methods

CLINICAL DIAGNOSIS BY LABORATORY METHODS. A Working Manual of Clinical Pathology. By James Campbell Todd, Ph.B., M.D., and Arthur Hawley Sanford, A.M., M.D. Seventh edition. Philadelphia and London, W. B. Saunders Company. 1931. 785 pages, illustrated. 8vo. Cloth, $6.00.

This is the first edition to be published since the recent death of Dr. Todd. As was to be expected, Dr. Sanford has retained the original form, thoroughly revised the text and brought it up to date. Among the new procedures described are Corper and Uyei's culture method for tuberculosis, Fairhall's method for lead, Folin's 1929 method of protein precipitation, new uric acid method and new copper solution for blood sugar, Clark and Collip's calcium method and the Keith, Rowntree and Geraghty blood volume method. In the chapter on gastric analysis, the alcohol meal and the histamine reaction are considered. There is also a discussion of the Aschheim-Zondek test.

Dr. Sanford has proved equal to the task imposed upon him and we predict this work will become more popular than ever.

E. B. SMITH.

Practical Dietetics

PRACTICAL DIETETICS FOR ADULTS AND CHILDREN IN HEALTH AND DISEASE. By Sanford Blum, A.B., M.S. Fourth edition. Philadelphia, F. A. Davis Company, 1931. 380 pages. 8vo. Cloth, $4.00.

In this edition a list of the chief sources of vitamins has been added also a discussion of the subject of alkaline foods in the treatment of acidosis with examples of alkaline ash foods and diets.

This is a practical book which gives the actual diets for most diseases giving lists of what to eat and what to avoid, without devoting much space to theoretical considerations.

The alphabetical arrangement of the diets and large headings are convenient for quick reference. W. E. MCCOLLOM.

Textbook of Histology

TEXTBOOK OF HISTOLOGY for medical and dental students. By Eugene C. Piette, M.D. Philadelphia, F. A. Davis Company, 1931. 466 pages, illustrated. 8vo. Cloth, $4.50.

An admirably simple textbook for medical and dental students, voluminously illustrated. NATHAN REIBSTEIN.

An Introduction to Gynecology

AN INTRODUCTION TO GYNECOLOGY. By C. Jeff Miller, M.D. St. Louis, The C. V. Mosby Company, 1931. 327 pages, illustrated. 4to. Cloth, $5.00.

Jeff Millers book is admirable. Intended for the use of beginners only, it contains an immense amount of information of practical value. Therapy is not discussed; the book lays a foundation for intelligent treatment. For the student it is perfect. For the general practitioner who has had experience in the treatment of pelvic lesions, often without a comprehensive knowledge of modern gynecology, it should be ideal. To them particularly this book is highly recommended. C. A. G.

Introduction to Biochemistry

AN INTRODUCTION TO BIOCHEMISTRY. By Roger J. Williams, Ph.D. New York, D. Van Nostrand Company, Inc., 1931. 501 pages, illustrated. 8vo. Cloth, $4.00.

A book on biochemistry, covering broader aspects of this science than are ordinarily presented on this subject to medical students, has been written by Dr. Williams. It is essentially a dissertation on the chemistry of organic life. This necessarily includes not only the biological chemistry applied to the animal organisms, but also plant chemistry, soil chemistry, and sanitary chemistry. This book would therefore be of value to the student of medicine as well as to one interested in bacteriology, zoology, botany, and workers in various organic industries such as fungicides, perfumes, fats, essential oils, paper and rubber. There are chapters on cell structure and its chemistry; nutritional requirements, and the metabolism of plants and animals. The book is well written and is recommended to medical students for additional reading in biochemistry particularly because of its broader cultural presentation of the subject.

WILLIAM S. COLLENS.

Resistance to Infectious Diseases

RESISTANCE TO INFECTIOUS DISEASES. An exposition of the biological phenomena underlying the occurrence of infection and the recovery of the animal body from infectious disease, with a consideration of the principles underlying specific diagnosis and therapeutic measures. By Hans Zinsser, M.D. Fourth edition. New York, The Macmillan Company, 1931. 651 pages, illustrated. 8vo. Cloth, $7.00.

The fourth edition is an excellent accomplishment in the way of improving an already highly reputable work. The author has succeeded in presenting a mine of information in this volume in a way which makes it easily digested by both medical students and interested practitioners. This, notwithstanding the hugeness of the problem that a treatise on medical immunology entails—the problem of correlation of facts from so many different sciences. The reader views with admiration the author's method of clear conveyance of such intricate subjects as: bacterial disassociation, the chemical and physical principles of antigen-antibody reaction and the nature of haptenes.

The chapter on hypersensitiveness deserves special mention. The author brings the subject up to date indicating the justification for his belief that fundamentally the controlling mechanism of hypersensitiveness in man are identical with anaphylactic phenomena in animals. From the material presented, one can't help sharing the author's opinion regarding this theory.

Students especially interested in certain special problems dealt with in this book, such as Isoantibodies may find cause for dispute on certain points, but these are of minor importance. They are undoubtedly due to the fact that in a volume of this type, each subject cannot possibly be dealt with as a complete treatise.

A feature which adds great practical value to this book is the application of immunological knowledge to diagnosis and therapy of infectious diseases. This section in itself serves as a ready reference book in every day immunology for the practicing physician. SILIK H. POLAYES.

Die Kollapstherapie der Lungentuberkulose und ihre Indikationsstellung

DIE KOLLAPSTHERAPIE DER LUNGENTUBERKULOSE UND IHRE INDIKATIONSSTELLUNG. Von Dr. Kurt Nicol. München, Aerztlichen Rundschau Otto Gmelin, 1931. 75 pages, illustrated. 8vo. Paper, Marks 4.50. (Sammlung diagnostisch-therapeutischer Abhandlungen für den praktischen Arzt. Heft 40.)

The modern theories of the treatment of tuberculosis by surgical pneumothorax, thoraco-plastic, and section of the phrenic nerve is well discussed in this little booklet which also contains 35 X-ray pictures for demonstration. The section of indication for surgical interference is particularly worth studying.

L. KOEMPEL.

Clinical Dietetics

CLINICAL DIETETICS: A Textbook for Physicians, Students and Dietitians. By Harry Gauss, M.S., M.D. St. Louis. The C. V. Mosby Company, 1931. 490 pages, illustrated. 8vo. Cloth, $8.00.

This book presents the principal facts of dietetics as given in the lectures by the author for several years at the Medical School of the University of Colorado.

The diets are presented in three forms, first in a detailed calculated way for the use of medical students and student dietitians, second as a week's menu for the guidance of hospital dietitians and third in simplified language for the patient himself.

Before stating the diets recommended for the various diseases, a discussion of the medical phases of the subjects is presented, frequently with case reports.

The book will be found to be sound and useful, presenting without fads, the principal facts known about nutrition.

W. E. MCCOLLOM.

A Review of Certain Aspects of Smallpox Prevention

(GREAT BRITAIN) Ministry of Health. A Review of Certain Present Aspects of Smallpox Prevention in Relation particularly to The Vaccination Acts, 1867-1907. London, His Majesty's Stationery Office, (New York, British Library of Information) 1931. 67 pages. 8vo. Paper, 30c, postage extra. (Reports on Public Health and Medical Subjects No. 62.)

This pamphlet is a brief but interesting review of the smallpox situation in England and Wales for the past half century. Not only is the incidence of the disease studied year by year but considerable space is devoted to the methods of governmental administrative control utilized in the prevention of the disease in accordance with the vaccination acts. Improvements are suggested relative to the present methods used including a change in the actual technique for vaccination. The importance of the age at which primary vaccination should be performed is particularly stressed. JOSEPH C. REGAN.

Die epidemische Kinderlähmung

DIE EPIDEMISCHE KINDERLÄHMUNG. Von Prof. C. W. Jungeblut, and others. München, Aerztlichen Rundschau Otto Gmelin, 1931. 132 pages, illustrated. 8vo. Paper, Marks 8.00.

This symposium of eminent medical writers is an elaborate treatise of this treacherous disease, so difficult to recognize in its early stage, and so disastrous to the victims, if not so recognized. The premonitory symptoms and the necessity of an early examination of the spinal fluid are interestingly discussed. The treatment during the attack and the management of the later (paralytic) stages are exhaustingly explained. A most efficient guide to those who come in frequent contact with this devastating disorder. L. KOEMPEL.

Accidental Injuries

ACCIDENTAL INJURIES: The Medico-Legal Aspects of Workmen's Compensation and Public Liability. By Henry H. Kessler, A.B., M.D. Philadelphia, Lea & Febiger, 1931. 718 pages, illustrated. 8vo. Cloth, $10.00.

Striking evidence of the constantly growing importance of Workmen's Compensation is afforded by the publication of this very excellent monograph by Henry H. Kessler. The span of compensation insurance in the world is less than fifty years and in this country twenty and in New York state eighteen. Admittedly, at its inception, a sociological experiment, it has come to be one of the most fundamental acts of social and economic justice in our statutes.

Dr. Kessler's experience has been unusually large comprising as it has the personal examination of over 63,000 individuals whose injuries brought them within the scope of compensation insurance. Supplementing this experience Dr. Kessler has the rare gift of brevity and terseness in writing, qualities that make his written work easily readable and understandable. Lay readers will be grateful for the latter and all for the former.

The arrangement of the contents is admirable and logical in its sequence. The selection, the breadth and catholicity in topics, comprising occupational diseases, the evaluation of schedule losses, an excellent bibliography, traumatic neuroses, etc., combine to make this work most attractive and useful. F. D. J.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Mrs. Maud H. Mellish-Wilson, Richard M. Hewitt, B.A., M.A., and Mildred A. Felker, B.S. Volume XXII, 1930. Philadelphia and London, W. B. Saunders Company, 1931. 1125 pages, illustrated. 8vo. Cloth, $13.00.

AMERICAN PHYSICIANS AND SURGEONS: A Biographical Directory of Practicing Members of the Medical Profession in the United States and Canada including supplements in which are listed and classified the leading hospitals, sanitariums and health resorts of both countries.

Prepared by James Clark Fifield. Minneapolis, The Midwest Company, (1931). 1737 pages. 4to. Cloth, $30.00.

THE PAPYRUS EBERS. Translated from the German version by Cyril P. Bryan, M.B., B.Ch. New York, D. Appleton and Company, 1931. 167 pages, illustrated. 8vo. Cloth, $3.00.

MEDICINE, SCIENCE AND ART: Studies in Interrelations. By Alfred E. Cohn. Chicago, The University of Chicago Press, 1931. 212 pages. 8vo. Boards, $4.00.

BEDSIDE INTERPRETATION OF LABORATORY FINDINGS. By Michael G. Wohl, M.D. St. Louis, The C. V. Mosby Company, 1931. 321 pages, illustrated. 8vo. Cloth, $6.00.

MODERN PROCTOLOGY. By Marion C. Pruitt, M.D., L.R.C.P. St. Louis, The C. V. Mosby Company, 1931. 404 pages, illustrated. 8vo. Cloth, $8.00.

CUTANEOUS X-RAY AND RADIUM THERAPY. By Henry H. Hazen, A.M., M.D. St. Louis, The C. V. Mosby Company, 1931. 166 pages, illustrated. 8vo. Cloth, $3.00

ASTHMA AND HAY FEVER IN THEORY AND PRACTICE. By Arthur F. Coca, M.D., Matthew Walzer, M.D., and August A. Thommen, M.D. Springfield, Ill., Charles C. Thomas, 1931. 851 pages, illustrated. 4to. Cloth, $8.50.

MARRIED LOVE: A New Contribution to the Solution of Sex Difficulties. By Marie Carmichael Stopes. New York, G. P. Putnam's Sons, 1931. 165 pages. 12mo Cloth, $2.00.

GENIUS AND CREATIVE INTELLIGENCE. By Nathaniel D. M. Hirsch, Ph.D., Cambridge, Sci-Art Publishers, 1931. 339 pages. 8vo. Cloth, $4.50.

COMMUNICABLE DISEASE CONTROL. Report of the Committee on Communicable Disease Control, George H. Bigelow, M.D., Chairman. White House Conference on Child Health and Protection. New York, The Century Company, (c. 1931). 243 pages. 8vo. Cloth, $2.25.

MEMORIE e COMUNICAZIONI SCIENTIFICHE (1894-1930). By Prof. Cesare Serono. Roma, Istituto Nazionale Medico Farmacologico Serono, (c. 1931). 701 pages. 4to. Paper.

WHAT THE PUBLIC SHOULD KNOW ABOUT CHILDBIRTH. By Walker Bourne Gossett, M.D. Minneapolis, The Midwest Company, 1931. 290 pages. 12mo Cloth, $2.00.

The Box of Pandora

(*Concluded from page 370*)

now unable to stay its ravages, much less abolish it, be looked to to abate war?

How can political dements be expected to challenge Mars himself who would not be able to act even if convinced that the simple brewing of good beer by modern processes would correct the deficiency of vitamin B in the American dietary that is going to play such havoc during the sick winter that looms horridly before us?

An encephalitis-like lethargy bewitches the world, whilst destructive forces enjoy free play; such efforts as we make seemingly aim to facilitate them.

Notice to the Members of the Associated Physicians of Long Island

The Fall meeting of the Associated Physicians of Long Island will be held on Tuesday, October 6th, 1931, at the Wheatley Hills Golf Club, Wheatley Hills, Long Island.

This promises to be a very interesting event.

The scientific program is being prepared by Dr. Gordon Gibson, Chairman of that committee.

He is providing two speakers prominent on Long Island for their scientific attainments, who are preparing papers of unusual general interest.

The names and titles will be mailed on the official notice.

The club management has given assurance that those men who care to enjoy a round of golf may do so in the morning by paying the usual Greens Fee of $3.00.

Luncheon will be served a la carte at the members individual expense.

Business meeting will be held just prior to the dinner in the late afternoon.

The dinner tickets can be procured from the Chairman of the Entertainment Committee.

After dinner speakers are to be men of local eminence.

The opportunity of attending this meeting should not be missed by any member of the society as he will gain both profit and pleasure in attending the entire session.

THOMAS B. WOOD, *Chairman*

The Doctor is Right

A physician says that success depends upon the functioning of the glands. The sweat glands?—*Minneapolis Journal.*

Contemporary Progress

(*Concluded from page 368*)

respiratory and intestinal tract changes were not prevented. If cod-liver oil was added to the diet, not only was the calcification of the bones normal, but growth was excellent and the respiratory and intestinal tracts normal. Since colds, malnutrition and "intestinal inadequacies" are more frequent in children than rickets, these findings suggest that the substitution of viosterol for cod-liver oil in the child's diet "is not logical and may result in an appreciable decrease of the child's strength and resistance to infections."

Pellagra and its Treatment

(*Concluded from page 363*)

The sores in his mouth greatly interfered with his eating. The patient did not respond to the usual treatment and diet, and died on August 15, 1930.

Case 11. Group 2.—C. H., white, aged 36, born in Philadelphia, driver, was admitted to the hospital on May 30, 1930, with a sore mouth, dermatitis of both hands, vomiting (a greenish yellow material) and abdominal pains. This man was a chronic alcoholic. He gave a history of insufficient diet. He had had no fresh meat for the past three months. He had lived mostly on coffee and had lost a great deal of weight and strength since the first of the year. His appetite was poor. The first symptom he noticed was that the back of his hands became red and finally sore. His mouth was sore and he developed diarrhea and pain in abdomen followed by nausea and vomiting. He constantly complained of shooting pains in the lower extremities, especially the feet. This man improved under the usual treatment and was discharged on August 17, 1930.

Case 12. Group 1.—J. R., white, aged 42, born in Philadelphia, was admitted to the hospital on June 3, 1930, with what appeared to be a sunburn dermatitis of both hands and feet with soreness of the mouth. This patient received the pellagra treatment and diet and was discharged June 19, 1930, with his condition improved.

Case 13. Group 1.—O. A., white, aged 52, born in Maryland, was admitted to the hospital on August 23, 1930, with hoarseness and diarrhea. The dorsa of both hands were dark-brown and desquamating. He was placed on a pellagra diet, brewer's yeast and HCl. He was subsequently discharged on September 8, 1930, with his record marked cured.

Case 14. Group 1.—E. S., colored, aged 45, laborer, place of birth unknown, was admitted to the hospital on July 14, 1930. His left arm was missing. The dorsum of his right hand and wrist had a pellagra dermatitis. In addition to his pellgara, he had myocarditis. This patient improved under the usual pellagra treatment and left the hospital on August 22, 1930.

Case 15. Group 3.—A. D., colored, aged 40, born in North Carolina, was admitted to the hospital on May 14, 1930, with a severe form of pellagra. She became delirious and maniacal, and died on May 21, 1930.

Case 16. Group 1.—E. P., white, aged 53, born in Philadelphia, was admitted to the hospital on July 9, 1930, with sunburn dermatitis of both hands. This patient responded to treatment and was discharged on August 22, 1930, as cured.

Case 17. Group 1.—J. F. S., white, aged 45, born in Philadelphia, was admitted to the hospital on May 14, 1930 with a mild form of pellagra. He responded to the usual treatment and was discharged on July 21, 1930, with his condition markedly improved.

Case 18. Group 1.—A. W. white, aged 64, weaver,

born in England, was admitted to the hospital on June 9, 1930, with a mild form of pellagra. He responded to the sponded to the treatment and was discharged on June 30, 1930, with his condition markedly improved.

Case 19. Group 1.—J. McC., white, aged 39, born in Philadelphia, was admitted to the hospital on July 30, 1930, with pellagra dermatitis of both hands. He also responded to the treatment and was discharged August 29, 1930, with his condition improved.

Three other cases, H. S., J. B., and G. B., belonging to group 3, were transferred to Byberry and their records were unobtainable.

In our first group, we had nine patients. All were discharged free of pellagra symptoms. Due to other physical disabilities, six were discharged as improved and three as cured.

In our second group, we had five patients, of which four were discharged free of pellagra symptoms and with their general condition improved, and one died. This patient was 60 years old and had had two previous attacks of pellagra.

In our third group, five died and three, because of their nervous symptoms, were transferred to Byberry.

The following are points to remember in our cases:

Sixteen were white and three were negroes. They ranged in age from 36 to 74 years. Three were foreign born, (2 in Ireland, 1 in England), ten were born in Philadelphia, one in Maryland, three in North Carolina, one in Massachusetts and the place of birth of one is unknown. All were male except for one female.

As a majority of patients admitted to the Philadelphia General Hospital are alcoholics, so a good many of these gave a history of alcoholism.

Conclusions

Pellagra seems to be on the increase, especially now with an army of unemployed living under conditions which ultimately bring poverty and privation. This may well lay the foundation for pellagra. The disease has been eradicated from Italy by the increased consumption of fresh milk, butter, cheese, beans, peas, fresh eggs, fresh lean meats and fruits.

Those of our cases at the hospital who presented skin lesions with mild bowel disturbances were improved or cured with the proper diet and very few drugs; but in those chronic cases wherein the bowels were seriously affected and the mind badly impaired, the treatments were of no avail.

There were no Jews in the 100 cases reported by Klauder and Winkelman[11] and none were found in our 22 cases, which is consistent with previous statistics. Undoubtedly, the well known immunity of the Jewish people to pellagra has been built up by the centuries of training in proper dietetics.

Fresh milk and meat is of such importance that if an individual who is known to be or has been a habitual milk drinker or meat eater presents suspicious symptoms of pellagra, then the suspicions may with confidence be dismissed.

Food and food alone will accomplish the eradication of pellagra.

1721 Spruce Street.

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Correspondence

Unauthorized Edition of Married Love

Editor The Medical Times:

We note in your review of "Married Love" your comment about an unauthorized edition of "Married Love."

We would thank you to make the following correction in your next issue of Medical Times: We are the owners of the American copyright of "Married Love" and as such owners we have commenced suit for alleged infringement of copyright against G. P. Putnam's Sons.

Very truly yours,
Eugenics Publishing Co

New York, September 9, 1931.

Diabetes Mellitus in the United States

A recent analysis of the apparent increase in the death-rate from diabetes mellitus in the United States has brought to light some noteworthy facts (*Statist. Bull.*, Life Extension Inst., N. Y., May, 1931). The increase is not at all uniform, it seems, when analysed by age, sex, or race. Mortality among older women, especially among colored women, shows a rise which more than outweighs the great and definite improvement among th young. In the years preceding the discovery of insulin the death-rate from diabetes was steadily increasing at all ages under 45; since 1922 there has been a sharp decline at those ages. Among males above this age the rate has remained fairly steady during the insulin period, but among females it has been stationary only between the ages of 45 and 55, and above this there has been a steady rise. Over 65, the mortality has increased among males by 25 per cent. and among females by 40 per cent., and if we take the last four-year period the increase has been 33 per cent. and 50 per cent. respectively. Among negroes there has been no improvement whatever. The death-rate for males under 45 has been stationary, while for females it has increased 60 per cent. Over 45, the male negro death-rate has gone up by 20 per cent. and the female by 75 per cent.

Unfortunately, it is not clear from the anaylsis whether diabetes was the primary or merely a contributory cause of death, and it may be that the increase in the older classes is due to improved diagnosis, and that the deaths were due to such causes as arterio-sclerosis, which, as Prof. D. M. Lyon and Dr. Murray Lyon (*The Lancet*, 1930, ii., 293.) have pointed out, is as likely to be a cause of diabetes as a result of it. These authors showed that in deaths from coma the average age in 150 cases was 37 years, while in "non coma" cases it was 62. It is difficult, however, to see why improved diagnosis should apply to women more than men, and to colored women more than white, and the figures strongly suggest that on the whole the incidence of diabetes has risen and that insulin does not deal effectively with the "degenerative" type of diabetes in elderly people, where this disease is only a small part of the picture.

Another interesting contribution is a study of 300 diabetic ex-Service men undertaken by the Medical Service of the United States Veterans Bureau (Matz, P. B.: *Military Surg.*, May, 1931). While no special tendency to diabetes, or modification of its effects as the result of warfare, seems to have been proved, the investigation confirms many of the points which have emerged from the study of the disease among the general population. For example, it was found that cases with a normal cholesterol content of the blood were more amenable to treatment than those in which it was high. The chief cause of the persistence of hyperglycæmia and glucosuria, in spite of insulin therapy, seemed to be the presence of complications or co-existing diseases—79 per cent. presented such complications, and the average number was 2.6 per patient. The mortality was 4.6 per cent., and in the 14 fatal cases five of the patients were over 45 years old. The principal cause of death in these five cases was stated to be diabetes mellitus in two, diabetic gangrene in two, and pulmonary tuberculosis in one; while the secondary causes were all arterio-sclerosis or its variants. Of the nine deaths under the age of 45, diabetic coma was the principal cause in four, pulmonary tuberculosis in four, and nephritis and myocarditis in one. An instructive feature of the series was that in only five out of 300 cases (1.7 per cent.) did the clinical symptoms in themselves denote the presence of diabetes, while 30 cases (10 per cent.) were entirely symptomless. This is exactly the figure given by Joslin, and shows once again the importance of routine examination of the urine.—*The Lancet*, Aug. 15, 1931.

Staphylococcal Infection of the Nose and Lip

The region of the nose and upper lip, drained by the anterior facial vein, has aptly been called the "danger area," with regard to staphylococcal infection. During the last two years attention has been directed, by a number of articles reporting fatal complications, to the serious consequences which may follow such infections. There is obviously some peculiarity about staphylococcal infections, apart from their close connection with the cavernous sinus and the meninges, which render them dangerous and often fatal when occurring at this site. A carbuncle of the neck is a common affection, but when it occurs in a young and healthy adult the results are very rarely fatal. The thick skin and the presence of a dense subcutaneous tissue help in the production of a natural barrier to the infection, and when the subcutaneous veins are involved they thrombose and collapse, and thus assist in shutting off the infection. Dr. Irwin I. Koslin points out (*Annals of Surgery*, July, 1931, p. 7.) clearly that the response to infection in the so-called danger area is different. The thin skin and subcutaneous tissue allow early and easy invasion of the veins, which are themselves different in structure; they are valveless and are "patent veins," which do not collapse when thrombosis occurs. They have, moreover, a very free connection with the cavernous sinus through the ophthalmic and angular veins. There is no definite evidence as to the means by which infection spreads from the primary focus to the cerebral sinus, though it must do so in one of three ways—by the lymphatics, by direct spread of thrombosis, or by a retrograde embolus.

The point of practical interest is how to deal with a small primary focus on the nose so that the dreaded spread to the cavernous sinus may be prevented. At the beginning of the century treatment on ordinary surgical lines was advocated, and incision and drainage was generally accepted, just as excision of a carbuncle of the neck is widely practised now. The results of such excision are excellent, but the results of surgical intervention when the focus is on the nose were extremely bad. It is generally accepted that incision, squeezing, ligature of the angular vein, and other active measures are dangerous in that they may break down the delicate barrier being erected between the body and an invader that will rapidly kill once the defences are broken through. It seems desirable, however, that conservative methods, such as hot bathing, fomentations, saturated magnesium sulphate dressings, poultices, and even ultra-violet light treatments should be supplemented at the right moment by puncture and cautrisation. In an article on cavernous sinus thrombosis as a fatal complication of minor facial sepsis (*The Lancet*, 1931, i., 960.) Mr. Scott Brown suggests that at the first definite sign of pointing, it is safe and wise to puncture a small focus with a sharpened orange stick which has been dipped in carbolic; larger or "blind boils" he treats with liquor hydrargyri nitratis acidus applied to the core, precautions being taken to avoid overflow of the acid on to the skin. It is important to emphasize the serious results that may follow these minor infections, but those who are fighting them and vividly anticipating the development of an orbital cellulitis, chemosis, or proptosis, should remember that, though septic foci on the nose, lip, and particularly the naso-labial fold, are common, Dr. Koslin collected only six fatal cases from the records of the Lebanon Hospital between 1922 and 1930, and Mr. Scott Brown only the same number from St. Bartholomew's Hospital over a similar period.—*The Lancet*, July 25, 1931.

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(O) Ampoules Acacia Solution,
(P) Ampoules Calcium Gluconate,
(Q) Ampoules Invert Sugar,
(R) Puerperal Serum, etc. Any one or all of the above will be forwarded to physicians postpaid on request. Eli Lilly & Company.

MT-187 "Everything for the Sick"—a 24 page illustrated booklet. Lindsay Laboratories.

MT- 78 "Glyconda Lloyd's Iron and Lloyd's Hydrastis," "Glyconda," (pleasant to the taste), "Libradol," A Medicated Plasma for External Use. Lloyd Brothers, Pharmacists, Inc.

MT-150 "Glon-O-Menth"—A Stable Nitroglycerin Compound. McBerk Laboratories.

MT- 82 "Rheumatism and Arthritis" and "Metabolism as Basic background in Disease." The Mellier Drug Company.

MT- 85 Complete file of Merck literature, including
(A) Skiabaryt, X-Ray Barium Sulphate,
(B) Prophylaxis and Treatment of Pneumonia;
(C) Arsenoferratose, for Blood-Building Iron;
(D) Pyridium, in the Treatment of Pyelitis;
(E) Fibrolysin, Cicatricial Resolvent;
(F) Ichthyol, in the Treatment of Skin Diseases;
(G) Quinisal, for Grip and Colds;
(H) Peroxiods, Tablets of Magnesium Superoxol;
(I) Bronchography with Brominized Oil in Tuberculous Patients;
(J) Ephedrine Hydrochloride Merck;
(K) Iodized Oil in X-Ray Diagnosis;
(L) Erythrol Tetranitrate Merck;
(M) Digitan, a Summary of the Principles Governing the Use of Digitalis, Merck & Co., Inc.

MT- 86 "Mu-Col" a Saline-Alkaline Powder makes a most useful Antiseptic Wash. Literature and sample. Mu-Col Company.

MT- 87 Booklets on: (A) Pneumonia,
(B) The Injection Treatment of Varicose Veins,
(C) Scarlet Fever,
(D) Vaccines,
(E) Hay Fever Antigens,
(F) Poison Ivy and Poison Oak Antigens,
(G) Cerebrospinal Fever treated with Antimeningococcic Serum,
(H) Ether—Oil Colonic Anesthesia,
(I) Small Pox Vaccine,
(J) Tuberculin,
(K) Amidopyrine,
(L) Bismuth in the Treatment of Syphilis,
(M) National Vaporizer. National Drug Company.

MT- 89 "Weighed and Measured Diets." Valuable 20 page booklet for diabetic patients. The John Norton Company.

MT- 90 "Fever" Method of Introducing "The Control Factor in Reduction of Excessive Fever Temperature." Numotizine, Inc.

MT- 96 "Diagnosis of Genito-Urinary Diseases and Syphilis" by Henry I. Berger, M. D. Od Chemical Company.

MT- 97 "The Story of Olajen" and "Notes on Digestion and Absorption." Olajen, Inc.

MT-100 (A) "Sclerosing Treatment of Varicose Veins and Internal Hemorrhoids,"
(B) "Viosterol in Oil—250 D,"
(C) "Estrogen and Lipo-Lutin,"
(D) "Adrephine (Adrenalin-Ephedrine Compound),"
(E) "Parodin (Parathyroid Extract),"
(F) "The Liver Treatment of Pernicious Anemia,"
(G) "Citronin For the Treatment of Cough,"
(H) "Panteric Tablets and Panteric Compound Tablets".
(I) "Thio-Bismol,"
(J) "Pituitrin (The Original Pituitary Extract),"
(K) "Pitressin (Beta-Hypophamine),"
(L) "Pitocin (Alpha-Hypophamine),"
(M) "Gas Gangrene Antitoxin,"
(N) "Ventriculin in the Treatment of Pernicious Anemia,"
(O) "Citralka (A Physiological Antacid),"
(P) "Mycozol for the Treatment of Epidermomycosis,"
(Q) "The Sulphocyanate Treatment of High Blood Pressure,"
(R) "Parke-Davis Theelin,"
(S) "Toxoid Immunization Against Diphtheria,"
(T) "The Immunogens." Parke, Davis & Company.

MT-105 "Diagnosis and Treatment of Diseases of the Liver," "Diagnosis of Cardio-Vascular Diseases," "Diagnosis of Nervous and Mental Diseases." Three publications by Dr. Henry I. Berger, published by Peacock Chemical Company and Sultan Drug Company.

MT-107 Pineoleum, its use in Acute Coryza or Acute Rhinitis. Liberal sample. The Pineoleum Company.

MT-110 "Vera-Perles of Sandalwood Comp." and "The Circulation of Bile." The Paul Plessner Company.

MT-113 "Gray's Glycerine Tonic Comp." The Purdue Frederick Co.

MT-115 "Remogland, Its Use in Cases of Endocrine Insufficiency", "Endocrinological Features of Impotentia Sexualis." Remogland Chemical Company.

MT-127 "When the Cross Roads are Reached in Hemorrhoids (Piles)," and "Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic." Schering & Glatz, Inc.

MT-180 (A) Intravenous Urography.
(B) The Peroral Effect of Follicular Hormones.
(C) Intravenous Pyelography with Uroselectan.
(D) Clinical Observations of a Potent Female Sex Hormone.
(E) Progynon—Science's latest contribution to female sex hormone therapy.
(F) Iopax—For Intravenous Visualization of the Kidneys and Ureters.
(G) Normacol—A Remedy for Civilization's Evil—Chronic Constitpation.

Perhaps there is something you need listed in the Classified!

(H) Neutralon.
(I) Chlorylen—An Analgesic for the Relief of Neuralgic Pain of the Face, Jaw and Teeth by Inhalation.
(J) Rectal Disease and Constipation.
(K) Hormone Therapy in Ovarian Hypofunction.
(L) Niazo—A Modern Genito-Urinary Antiseptic for Oral Use. Schering Corporation.

MT-128 "Digitol," "Caprokol," "Diphtheria Antitoxin," "Super-Concentrated—Mulford," "Hexylresorcinol Solution S. T. 37." These and many others you can get literature on from Sharp & Dohme.

MT-131 Literature on "Glykeron," and "Ergoapiol (Smith)" Martin H. Smith Company.

MT-135 "Vitamexol," A Reconstructive and Scientific Builder. R. J. Strasenburgh Company.

MT-140 "Viburno," Its action upon the Genito-Urinary System, and "Table for Determining Date of Delivery." The Viburno Company, Inc.

MT-144 "Building Resistance (Guiatonic)," "Acidosis and Infection (Alka Zane)," "Imhotep—Egyptian Medicine was a Quaint Mixture of Rationalism and Magic (Agarol)," "The First Question (Agarol)," "Acidosis—A Warning Sign in Pregnancy (Alka Zane)." William R. Warner & Co., Inc.

MT-148 "Secret of our Digestive Glands," "Angostura Bitters in the Daily Practice." J. W. Wuppermann Agency, Inc.

MT-190 (A) Physician's Pocket List with Formulae of Suppositories of Cacao Butter, Glycerin and Gelatin.
(B) Lithium and Potassium Carbonates.
(C) Collyrium—Wyeth, a soothing eye lotion.
(D) Morramin, Alterative and reconstructive tonic.
(E) Cerose—Wyeth, Cherry and Codeine Comp. John Wyeth & Brother.

MT-160 "Six Proven Features of Bismogenol." Pamphlet on this product for the treatment of Syphilis in all stages. Also Chemical Opinions on NITROSCLERAN for Hypertension, and EKZEBROL for Eczema. George J. Young, Inc., Distributors.

RUBBER GOODS

MT- 68 "Interstate Quality Atomizers." Interstate Rubber Company, Inc.

SANITARIUMS AND HEALTH RESORTS

MT- 18 Dr. Barnes Sanitarium. A beautifully illustrated pamphlet of this Connecticut Institution.

MT- 27 "Bright Side" Sanitarium for the treatment and care of Incurables, Chronic Diseases and General Invalidism. "Bright Side" Sanitarium, Teaneck, N. J.

MT- 29 The Brunswick Home, a private sanitarium in Amityville, L. I. The Brunswick Home.

MT- 44 The Easton Sanitarium. A beautifully illustrated pamphlet of this Pennsylvania sanitarium.

MT- 49 Fair Oaks, A well known institution in Summit, N. J., directed by Dr. T. P. Prout. Fair Oaks.

MT- 55 Illustrated pamphlets of this health resort, the home of Pluto. French Lick Springs Hotel Company.

MT- 63 Illustrated pamphlet of one of New Jersey's Institutions. Idylease Inn.

MT- 65 An illustrated pamphlet of this well-known Goshen, N. Y., Institution. "Interpines."

MT-170 Rest Haven—A Convalescents' and Invalids' Home. Convenient to Bridgeport and New York Area. Illustrated booklet. Rest Haven.

MT-122 "Rejuvenation of Tired Business Men." Roosevelt Health Institute.

MT-125 The Ross Sanitarium. Illustrated Pamphlet of this well known Long Island Institution. Dr. William H. Ross.

MT-136 "Hospital Treatment for Alcohol and Drug Addiction." Charles B. Towns Hospital.

MT-146 Westport Sanitarium. Descriptive literature, directed by Dr. F. D. Ruland. Westport Sanitarium.

SURGICAL INSTRUMENTS AND SUPPLIES

MT-119 Everything for the Sick. Roberts & Quinn, Inc.

WATERS

MT- 55 Pluto Water—Nature's method of assisting in Habitual Constipation, disorders of the Kidneys and Gastrointestinal tract. Literature and Samples. French Lick Springs Hotel.

MT- 69 "Alkalinization—Its Indications and Attainment." A 32 page booklet. Kalak Water Company.

MT-116 "Mineral Waters Therapeutically Considered," "Health Hints for the Sedentary Worker" and "Health Hints at Home and Abroad." Hiram Ricker & Sons.

Perhaps there is something you need listed in the Classified!

Diathermy in General Paresis

A comparative study of therapeutic results obtained in a series of clinically similar cases of dementia paralytica treated with malaria, sodoku, and diathermy has been made.

The remission and improvement rate of diathermy exceeds that of malaria and sodoku.

The death rate with the diathermy method is nil.

Diathermy offers a hope of remission in types of dementia paralytica which seemed to be unamenable to treatment of any kind.

The serologic changes produced by any form of hyperpyrexia do not coincide with the clinical changes.

Diathermy permits the treatment of cases in which the use of malaria or sodoku would be contraindicated.

The use of this method is easily accessible to any physician, trained in the technic.

In many cases the treatment can be given ambulantly.—Clarence A. Neyman, M.D., Michael T. Koenig, M.D., *J. A. M. A.*, May 20, 1931.

The Mount Sinai Consultation Service

Its program for a Consultation Service for people of moderate means is clearly and succinctly described in a little leaflet which Mt. Sinai Hospital has recently issued. In it the Hospital answers most of the questions on which speculation has been rife in the profession since the first announcements of the projected service were made.

The Mt. Sinai plan differs in many important respects from that in operation at Cornell. While the latter treats patients, the service at Mt. Sinai will be purely diagnostic and patients will be returned to their family doctors for whatever therapy is indicated. No patient will be accepted who is not referred by his personal physician.

Economic eligibility to the proffered service rests on a fixed scale of earnings. A maximum annual income of twenty-four hundred dollars is set for unmarried patients. Families numbering five or less will be accepted if their combined income does not exceed four thousand dollars a year.

There is one question that every physician should continually ask himself, a question that every individual in the world might well ask himself before undertaking any small or great duty. This question is, "What good will it do?" If an operation is toward, if advice is needed, if a prescription is contemplated, or, in fact, any of the multiform duties or needs of life or influence are at hand, this question may lead to a wise choice and one's duty be more efficiently performed. Together with this question and inseparable from it is the other—"What harm may result?"

This minute and meticulous examination of character and of personality is sometimes productive of good. It is believed that it is a form of mental catharsis in which the patient relieves himself of an idea which is in his mind and doing him harm, and it is supposed that such confession clears the mind, obviates introspection, and at once brings about a more wholesome state of thought and mental hygiene. As a matter of fact, it often increases introspection and forces false values upon the personality of the subject. There is often a need of such studies, but we are of the opinion that any such conclusions that are offered to diminish the sanctity of the memory of the revered and honored dead are a perversion of medical practice, a violation of medical confidence, and serve no good purpose. There are many things that should be told in a low voice or not at all, and if these things are true, which we very much doubt, they should never have been given public utterance.

We are very sure that the medical profession as a whole does not approve of this paper of Dr. Brill, and we are equally sure that it does not so easily cast aside that most sacred and inviolable of all the duties and privileges of our learned and admired profession—professional secrecy.—*R. I. Med. Jour.*

The New Medical Research Laboratory of Eli Lilly & Company

Of interest to all medical men is a recent news item from Indianapolis announcing plans for the construction of a new medical research laboratory by Eli Lilly and Company. Ground was broken about October first. Originally it had been planned to start construction next spring. On account of the labor situation it was decided to advance the work which will give employment to a large number of men throughout the winter months.

For some years Eli Lilly and Company have placed special emphasis on medical research. Eighteen years ago a fine new building was erected to house the staff and equipment of a scientific department. As opportunities presented themselves the work of this division of the business has expanded until the facilities were no longer adequate to the needs of the company.

Eli Lilly and Company are authority for the statement that this new research unit will be the finest of its kind in the country. It will be four stories above ground. The dimensions will be 222 x 50 feet with an auxiliary building at the rear 84 x 50 feet. The structure will be of monumental design, of reinforced concrete with brick exterior.

The building will house the latest and most advanced scientific equipment. It is said, on good authority, that the value of the interior furnishings and laboratory apparatus will greatly exceed the cost of the building. Another feature of this new Lilly medical research unit will be a very complete scientific library which will occupy the top floor of the building. It is interesting to note that in addition to the present science building the company also maintains research laboratories at its biological plant outside of Indianapolis and also at the Marine Biological Laboratories, at Woods Hole, Massachusetts, during the summer months.

Calcium in Pregnancy

Errors of nutrition committed during pregnancy, according to a recent statement issued by a well-known specialist in this field, may easily produce derangements of health whose effects on mother and babe may last throughout life. Perhaps the most frequent error of nutrition during pregnancy is deficiency of calcium in the diet, as witness the appalling prevalence of rickets in this country.

Because of the great total volume of calcium required during pregnancy and lactation, it does not take much lessening of the daily supply to produce detectible effects in the child and mother. In 51 determinations the average calcium in normal mothers' milk was 32.6 mg. per 100 c.c. while 27.5 mg. was the average from mothers with definitely rachitic children.

Now that Stewart and Percival of Edinburgh have found that calcium is most assimilable when in ionized state in the presence of phosphorus, many physicans make it a routine practice to prescribe calcium in this form. Many favor Hagee's Original Cordial Compound for this purpose because of its long and successful record. This preparation contains glycerophosphate of calcium plus cod liver oil extract to aid in its absorption. It has the added advantage of being palatable, entirely free from nauseating, fishy taste.

The makers offer to send a sample bottle to physicians who address them: Katharmon Chemical Company, 101 North Main Street, Saint Louis, Missouri.

Misleading Phenomena of Hypothyroidism

Insufficiency of thyroid secretion sometimes shows its most striking effects through malfunctioning of the brain cells. The patient may become depressed and apprehensive, thought may become slow and bodily movements retarded. The condition is easily mistaken for a depressed psychosis. Or there may be irritability and excitement leading to the diagnosis of mania. Patients may show thought distortion with hallucinations and delusions, which may become so bizarre as to be interpreted as signs of dementia praecox.

In these psychotic cases, even though the physical signs of myxedema are present, those signs are easily overlooked. This is partly because some physicians at once relegate patients who show mental derangement into a nimbus of mystery and infer that somatic disease cannot be expressed in mental symptomatology. A more excusable cause for overlooking evidence of physical disease is that the patient's mental attitude sometimes makes physical examination difficult or impossible.—Emeline P. Hayward, M.D. and Andrew H. Woods, M.D., *J. A. M. A.*, July 18, 1931.

When Hemorrhoids Are Present

When hemorrhoids are present and soft but non-burning stools are essential, Prunoids will give entire satisfaction. Slightly cholagogue, non-griping, Prunoids produces soft formed stools moving without effort or spastic contractions. No leakage; no burning. Unless constipation is definitely present one tablet every other day will be sufficient for the purpose.